1988
ALBERTA HOUSE COST COMPARISON STUDY

24 Unit
Walk-up Apartment

Alberta
MUNICIPAL AFFAIRS
Housing Division

1988 ALBERTA HOUSE COST COMPARISON STUDY

WALK - UP APARTMENT

SEPTEMBER 1988

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PREFACE

The main purpose of the 1988 Alberta House Cost Comparison Study was to provide estimates of the hard construction costs of a prototypical single-detached dwelling and a 24 unit walk-up apartment in ten urban centres in this Province.

The study also compared 1988 residential construction costs with those of previous years in the selected urban centres. Most emphasis was given to a comparison of 1988 with 1987 costs and the study included an analysis of these differences.

The 1988 study was carried out by Helyar & Associates and is documented in three reports:

1988 Alberta House Cost Comparison Study : Executive Summary
1988 Alberta House Cost Comparison Study : Single-Detached Dwelling
1988 Alberta House Cost Comparison Study : Walk-Up Apartment

Additional copies of any of these reports can be ordered from :

ALBERTA MUNICIPAL AFFAIRS
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2nd Floor, 9925 - 107 Street
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1.0 INTRODUCTION

1.0 INTRODUCTION

1.1 Objectives

The objectives of the 1988 Alberta House Cost Comparison Study were:

1. To determine 1988 hard residential construction costs in selected urban centres in Alberta.
2. To determine reasons for differences in residential construction costs in the selected centres.
3. To carry out detailed comparisons of 1988 residential construction costs with 1987 residential construction costs in the selected centres.
4. To determine and comment on residential construction cost trends over the last nine years in the selected centres.

1.2 Scope of Work

The 1988 Alberta House Cost Comparison Study examined the construction costs of a typical single-detached dwelling and a 24 unit walk-up apartment building.

The study has been documented in three reports : an Executive Summary, a report on a typical single-detached dwelling and a report on a walk-up apartment. This report deals with the walk-up apartment.

The study examines building construction costs in the following centres:

1. Edmonton
2. Calgary
3. Red Deer
4. Fort McMurray
5. Grande Prairie
6. Hinton
7. Lethbridge
8. Medicine Hat
9. Lloydminster
10. Peace River

1.0 INTRODUCTION

1.2 Scope of Work (continued)

The cost analysis of both the single-detached dwelling and the walk-up apartment examined the building construction cost differences between each of the centres and identified the reasons for those differences with reference to such factors as :

a) material costs,
b) labour costs, and
c) building features and inclusions.

The cost estimates of the walk-up apartment for each centre include all structural, finishing, mechanical, and electrical work as shown on the drawings and included in the specifications, and also include allowances for site overhead and contractors'overhead and profit. The cost estimates exclude the following items:

a) cost of land and site clearance,
b) site servicing costs,
c) site development costs,
d) design fees and expenses,
e) legal fees and expenses, and
f) marketing and real estate financing costs.

1.0 INTRODUCTION

1.3 Drawings

The drawings used in the study for the walk-up apartment include :

1) Site plan
2) Foundation plan
3) Basement floor plan
4) Main floor plan
5) 2nd & 3rd floor plan
6) Building elevations
7) Section and details
8) Basement floor plan - Mechanical Layout
9) Main floor plan - Mechanical Layout
10) 2nd & 3rd floor plan - Mechanical Layout
11) Basement floor plan - Electrical Layout
12) Main floor plan - Electrical Layout
13) 2nd & 3rd floor plan - Electrical Layout

These drawings are included in the Appendix.

1.4 Approach

The building construction costs are detailed in the report under the headings of labour and material/equipment costs. Labour rates used in the report are either those established by the trade union concerned, or by the market where trade union rates do not apply. In most cases, a realistic assessment of labour rates has been established by examining the circumstances of the particular sub-trade within the building industry. Material prices have been evaluated from building materials suppliers' lists. Average discounts are applied in order to establish a realistic market price for the materials to contractors.

1.0 INTRODUCTION

1.4 Approach (continued)

The cost data are assembled by sub-trade and presented in 25 trade categories. The sub-trade operations are combined within each trade category in order to reflect current estimating practice within the industry. Site overhead and general contractor's office overhead and profit are shown separately to indicate the site costs.

A computer program was developed in order to collate and present the cost data which were assembled for the ten centres. The quantities and trade descriptions were initially established for the prototypical house and apartment building. The cost data applicable to the relevant quantities and trade descriptions for each centre were then processed by computer.

The cost effects of market forces and building industry conditions are addressed in the 'Commentary' section of this report.

2.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

2.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA. 1 : Total Building Costs

ITEM	EDMONTON		CALGARY		RED DEER		FORT McMURRAY		GRANDE PRAIRIE		HINTON		LETHBRIDGE		MEDICINE HAT		LLOYDMINSTER		* PEACE RIVER	
ELEMENT	TOTAL $	%	TOTAL $	%	TOTAL $	%	TOTAL $	%	TOTAL $	%	TOTAL $	%	TOTAL $	%	TOTAL $	%	TOTAL $	%	TOTAL $	%
Labour	253,906	35.0	265,108	35.6	264,349	35.4	308,027	36.3	296,731	36.2	282,472	35.3	266,530	35.4	269,116	35.5	281,377	35.6	301,150	36.0
Material	472,076	65.0	479,312	64.4	483,106	64.6	539,808	63.7	523,314	63.8	517,507	64.7	487,009	64.6	489,332	64.5	508,726	64.4	535,974	64.0
Total 1988	725,982	100.0	744,420	100.0	747,455	100.0	847,835	100.0	820,045	100.0	799,979	100.0	753,539	100.0	758,448	100.0	790,103	100.0	837,124	100.0
Cost per m2	$390.94		$400.87		$402.51		$456.56		$441.60		$430.79		$405.78		$408.43		$425.47		$450.79	
Cost per SF	$36.32		$37.24		$37.39		$42.42		$41.03		$40.02		$37.70		$37.94		$39.53		$41.88	
Total per Apt. 1988 $	$30,249		$31,018		$31,144		$35,326		$34,169		$33,332		$31,397		$31,602		$32,921		$34,880	
Total 1987 $	693,517		724,502		734,041		830,902		791,155		776,523		728,692		731,429		777,454		-	
Total per Apt. 1987 $	28,897		30,188		30,585		34,621		32,965		32,355		30,362		30,476		32,394		-	
Changes From 1987	4.7%		2.7%		1.8%		2.0%		3.7%		3.0%		3.4%		3.7%		1.6%		-	

* Peace River was not included in previous years studies.

Note : Several total figures may appear in this report as not being added correctly. This is due to the rounding effect in the calculations of the detail costing for each centre.

2.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA. 2 : Comparative Cost Ratios *

LOCATION	EDMONTON	CALGARY	RED DEER	FORT McMURRAY	GRANDE PRAIRIE	HINTON	LETHBRIDGE	MEDICINE HAT	LLOYD-MINSTER	PEACE RIVER
EDMONTON	1.00	1.03	1.03	1.17	1.13	1.10	1.04	1.05	1.09	1.15
CALGARY	0.98	1.00	1.00	1.14	1.10	1.08	1.01	1.02	1.06	1.13
RED DEER	0.97	1.00	1.00	1.14	1.10	1.07	1.01	1.02	1.06	1.12
FORT McMURRAY	0.86	0.88	0.88	1.00	0.97	0.94	0.89	0.89	0.93	0.99
GRANDE PRAIRIE	0.89	0.91	0.91	1.03	1.00	0.98	0.92	0.93	0.96	1.02
HINTON	0.91	0.93	0.93	1.06	1.03	1.00	0.94	0.95	0.99	1.05
LETHBRIDGE	0.96	0.99	0.99	1.13	1.09	1.06	1.00	1.01	1.05	1.11
MEDICINE HAT	0.96	0.98	0.99	1.12	1.08	1.06	0.99	1.00	1.04	1.10
LLOYD-MINSTER	0.92	0.94	0.95	1.07	1.04	1.01	0.95	0.96	1.00	1.06
PEACE RIVER	0.87	0.89	0.89	1.01	0.98	0.96	0.90	0.91	0.94	1.00

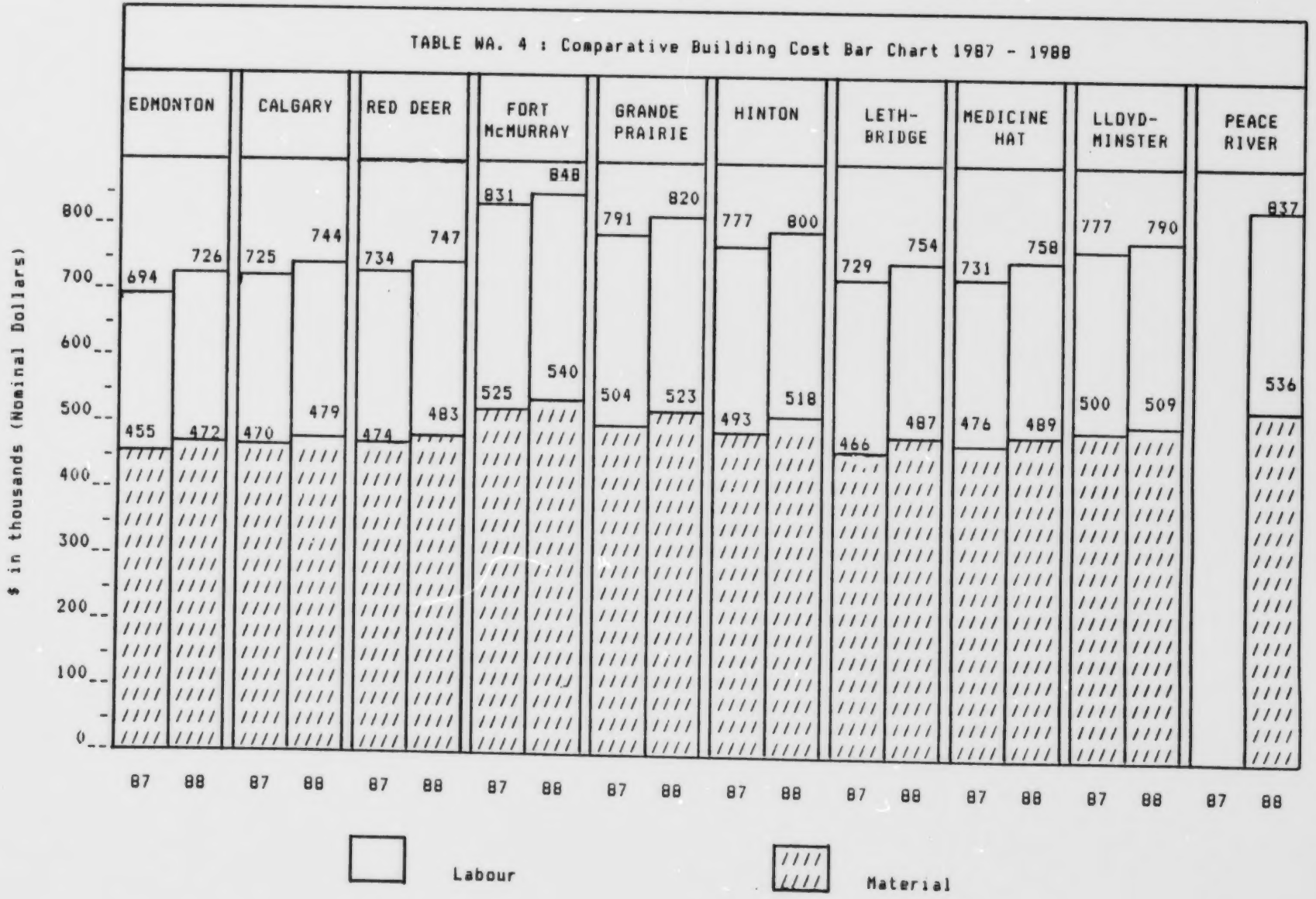
* Entries refer to the ratio of the price for a city in the top row of the table divided by a price for the city listed in the column. For example, Red Deer costs are 1.03 times Edmonton costs.

2.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA. 3 : Comparative Cost Table 1987 - 1988

LOCATION	EDMONTON	CALGARY	RED DEER	FORT McMURRAY	GRANDE PRAIRIE	HINTON	LETHBRIDGE	MEDICINE HAT	LLOYD-MINSTER	PEACE RIVER
Labour Cost										
1988	$253,906	$265,108	$264,349	$308,027	$296,731	$282,472	$266,530	$269,116	$281,377	$301,150
1987	$238,792	$254,433	$260,177	$305,499	$286,803	$283,222	$262,741	$255,350	$277,310	$0
Difference	$15,114	$10,675	$4,172	$2,528	$9,928	($750)	$3,789	$13,766	$4,067	$0
% Difference	6.3%	4.2%	1.6%	0.8%	3.5%	-0.3%	1.4%	5.4%	1.5%	0.0%
Mat'l Cost										
1988	$472,076	$479,312	$483,106	$539,808	$523,314	$517,507	$487,009	$489,332	$508,726	$535,974
1987	$454,724	$470,068	$473,862	$525,402	$504,352	$493,300	$465,953	$476,078	$500,148	$0
Difference	$17,352	$9,244	$9,244	$14,406	$18,962	$24,207	$21,056	$13,254	$8,578	$0
% Difference	3.8%	2.0%	2.0%	2.7%	3.8%	4.9%	4.5%	2.8%	1.7%	0.0%
Total Cost										
1988	$725,982	$744,420	$747,455	$847,835	$820,045	$799,979	$753,539	$758,448	$790,103	$837,124
1987	$693,517	$724,502	$734,041	$830,902	$791,155	$776,523	$728,692	$731,429	$777,454	$0
Difference	$32,465	$19,918	$13,414	$16,933	$28,890	$23,456	$24,847	$27,019	$12,649	$0
% Difference	4.7%	2.7%	1.8%	2.0%	3.7%	3.0%	3.4%	3.7%	1.6%	0.0%

2.0 SUMMARY OF FINDINGS FOR THE WALK - UP APARTMENT



2.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA. 5 : Comparative Total Building Costs 1980 -1988 *

YEAR	AVERAGE	EDMONTON	CALGARY	RED DEER	FORT McMURRAY	GRANDE PRAIRIE	** HINTON	LETHBRIDGE	MEDICINE HAT	*** LLOYD-MINSTER	**** PEACE RIVER
1980	$709,337	$660,295	$670,183	$685,282	$811,898	$736,435	-	$703,808	$697,459	-	-
1981	$756,703	$714,492	$719,003	$733,211	$861,728	$784,409	-	$740,084	$743,992	-	-
1982	$712,232	$665,273	$627,844	$710,485	$805,134	$700,436	$744,686	$720,280	$723,716	-	-
1983	$644,459	$603,046	$592,174	$623,852	$712,262	$669,574	$674,046	$632,872	$647,845	-	-
1984	$658.084	$600,039	$591,861	$624,342	$731,995	$694,794	$693,688	$632,121	$652,014	$701,901	-
1985	$669,882	$625,974	$617,049	$644,466	$734,420	$695,480	$690,526	$651,143	$655,347	$714,537	-
1986	$699,967	$648 534	$647,135	$665,963	$778,075	$742,644	$731,043	$679,312	$676,195	$730,802	-
1987	$754,246	$693,517	$724,502	$734,041	$830,902	$791,155	$776,523	$728,692	$731,429	$777,454	-
1988	$782,493	$725,982	$744,420	$747,455	$847,835	$820,045	$799,979	$753,539	$758,448	$790,103	$837,124

Notes :
* Expressed in nominal dollars
** Hinton was not included in the 1980 and 1981 studies
*** Lloydminster was not included in the 1980 through 1983 studies
**** Peace River was not included in the 1980 through 1987 studies

2.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA. 6 : Comparative Cost per Square Foot of Gross Floor Area 1980 -1988 *

YEAR	AVERAGE	EDMONTON	CALGARY	RED DEER	FORT McMURRAY	GRANDE PRAIRIE	** HINTON	LETHBRIDGE	MEDICINE HAT	*** LLOYD-MINSTER	**** PEACE RIVER
1980	$35.48	$33.04	$33.52	$34.28	$40.61	$36.84	-	$35.20	$34.89	-	-
1981	$37.86	$35.75	$35.97	$36.68	$43.11	$39.24	-	$37.03	$37.22	-	-
1982	$35.63	$33.28	$31.41	$35.54	$40.28	$35.04	$37.26	$36.03	$36.21	-	-
1983	$32.24	$30.17	$29.63	$31.21	$35.63	$33.50	$33.72	$31.66	$32.41	-	-
1984	$32.92	$30.02	$29.61	$31.23	$36.62	$34.76	$34.70	$31.62	$32.62	$35.11	-
1985	$33.51	$31.32	$30.87	$32.24	$36.74	$34.79	$34.55	$32.58	$32.79	$35.75	-
1986	$35.02	$32.44	$32.37	$33.32	$38.93	$37.15	$36.57	$33.98	$33.83	$36.56	-
1987	$37.73	$34.70	$36.25	$36.72	$41.57	$39.58	$38.85	$36.46	$36.59	$38.89	-
1988	$39.15	$36.32	$37.24	$37.39	$42.42	$41.03	$40.02	$37.70	$37.94	$39.53	$41.88

Notes :
- * Expressed in nominal dollars
- ** Hinton was not included in the 1980 and 1981 studies
- *** Lloydminster was not included in the 1980 through 1983 studies
- **** Peace River was not included in the 1980 through 1987 studies

2.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

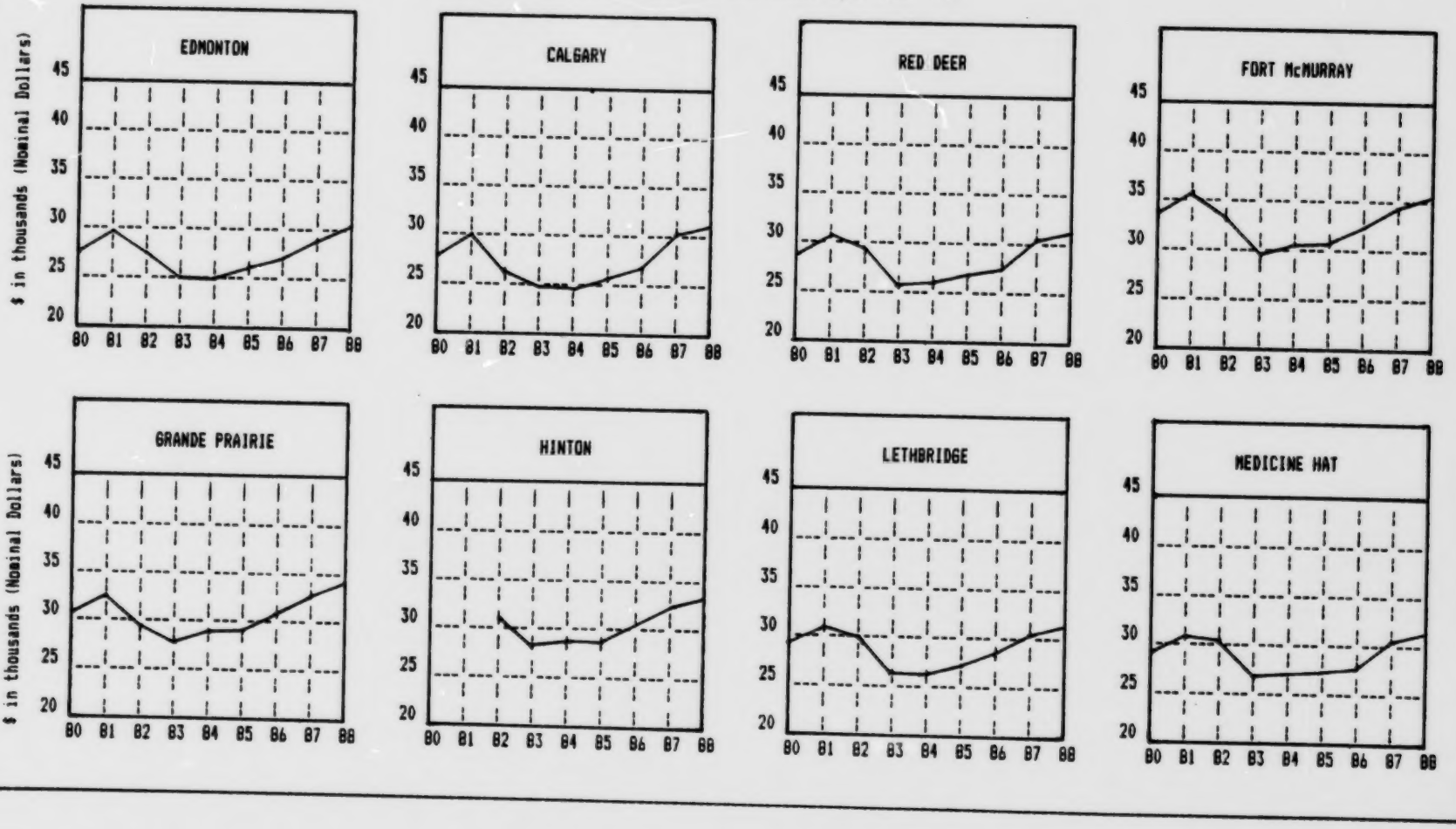
TABLE WA. 7 : Comparative Cost per Apartment Unit 1980 -1988 *

YEAR	AVERAGE	EDMONTON	CALGARY	RED DEER	FORT McMURRAY	GRANDE PRAIRIE	** HINTON	LETHBRIDGE	MEDICINE HAT	*** LLOYD-MINSTER	**** PEACE RIVER
1980	$29,555	$27,512	$27,924	$28,553	$33,829	$30,684	-	$29,325	$29,061	-	-
1981	$31,529	$29,771	$29,958	$30,550	$35,905	$32,684	-	$30,837	$31,000	-	-
1982	$29,677	$27,720	$26,160	$29,604	$33,547	$29,185	$31,029	$30,012	$30,155	-	-
1983	$26,853	$25,127	$24,674	$25,994	$29,678	$27,899	$28,085	$26,370	$26,994	-	-
1984	$27,420	$25,002	$24,661	$26,014	$30,500	$28,950	$28,904	$26,338	$27,167	$29,246	-
1985	$27,912	$26,082	$25,710	$26,853	$30,601	$28,978	$28,772	$27,131	$27,306	$29,772	-
1986	$29,165	$27,022	$26,964	$27,748	$32,420	$30,944	$30,460	$28,305	$28,175	$30,450	-
1987	$31,427	$28,897	$30,188	$30,585	$34,621	$32,965	$32,355	$30,362	$30,476	$32,394	-
1988	$32,604	$30,249	$31,018	$31,144	$35,326	$34,169	$33,332	$31,397	$31,602	$32,921	$34,880

Notes : * Expressed in nominal dollars
** Hinton was not included in the 1980 and 1981 studies
*** Lloydminster was not included in the 1980 through 1983 studies
**** Peace River was not included in the 1980 through 1987 studies

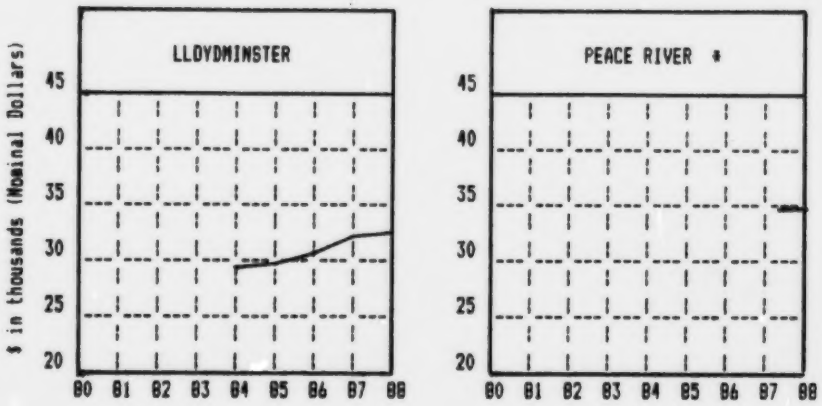
2.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA. B : Comparative Apartment Unit Cost Graphs 1980 -1988



2.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA. 8 : Comparative Apartment Unit Cost Graphs 1980 -1988 (Continued)



* Peace River not included in previous studies.

2.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA. 9 : Comparative Cost per Apartment Unit 1980 -1988 (Inflation Adjusted Dollars) *

YEAR	AVERAGE	EDMONTON	CALGARY	RED DEER	FORT McMURRAY	GRANDE PRAIRIE	** HINTON	LETHBRIDGE	MEDICINE HAT	*** LLOYD-MINSTER	**** PEACE RIVER
1980	$45,575	$42,424	$43,059	$44,029	$52,164	$47,315	-	$45,219	$44,812	-	-
1981	$42,975	$40,578	$40,833	$41,640	$48,939	$44,548	-	$42,031	$42,253	-	-
1982	$36,591	$34,179	$32,255	$36,502	$41,363	$35,985	$38,259	$37,005	$37,181	-	-
1983	$31,445	$29,424	$28,893	$30,439	$34,753	$32,670	$32,888	$30,879	$31,610	-	-
1984	$31,341	$28,577	$28,188	$29,734	$34,862	$33,090	$33,037	$30,104	$31,052	$33,428	-
1985	$31,038	$29,003	$28,590	$29,861	$34,028	$32,224	$31,994	$30,170	$30,364	$33,106	-
1986	$31,207	$28,914	$28,851	$29,690	$34,689	$33,110	$32,592	$30,286	$30,147	$32,582	-
1987	$32,370	$29,764	$31,094	$31,503	$35,660	$33,954	$33,326	$31,273	$31,390	$33,366	-
1988	$32,604	$30,249	$31,018	$31,144	$35,326	$34,169	$33,332	$31,397	$31,602	$32,921	$34,880

Notes : * 1. Expressed in 1988 Inflation adjusted dollars
2. Inflation adjustments have been based on the Consumer Price Index for Edmonton and Calgary

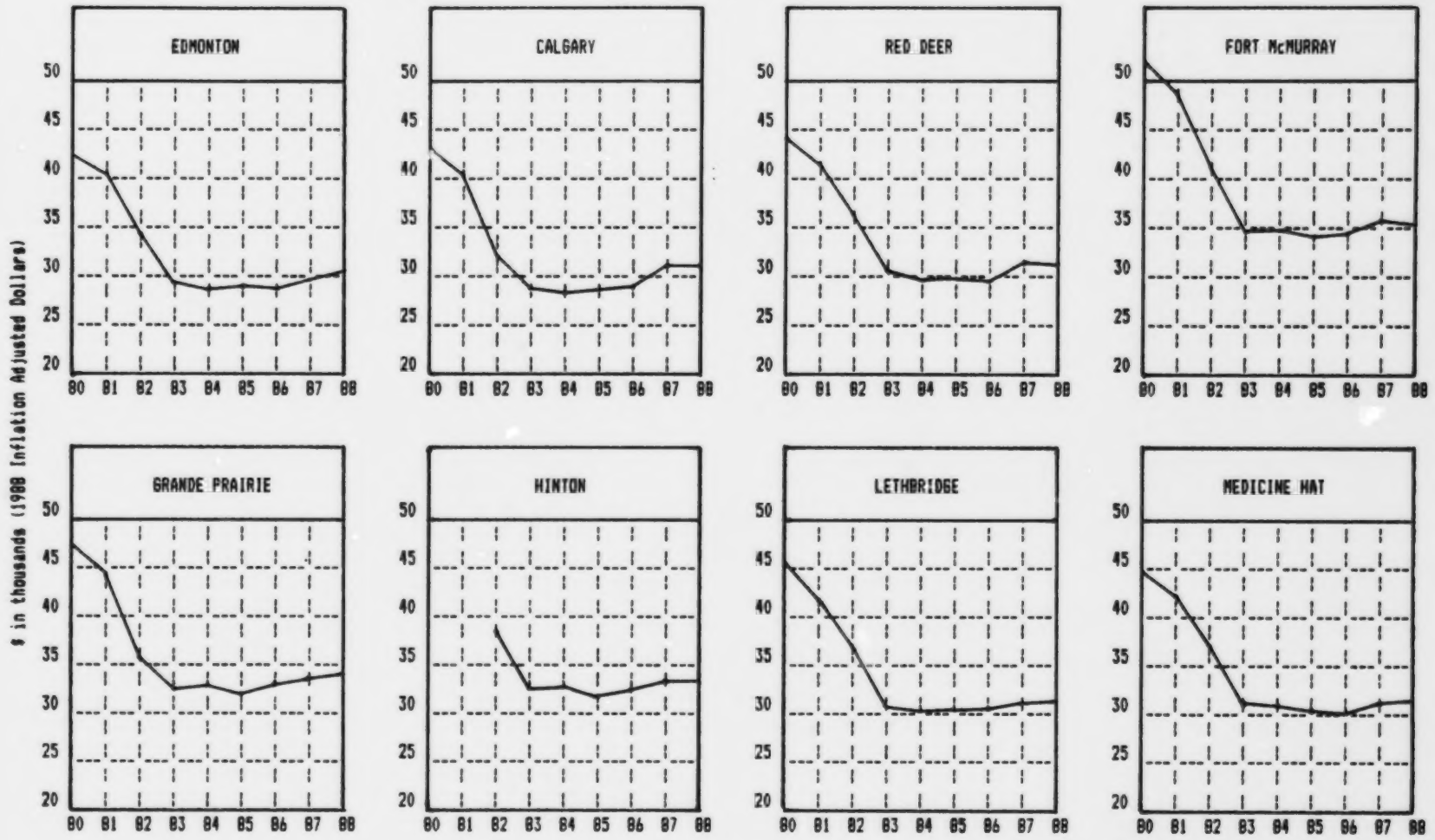
** Hinton was not included in the 1980 and 1981 studies

*** Lloydminster was not included in the 1980 through 1983 studies

**** Peace River was not included in the 1980 through 1987 studies

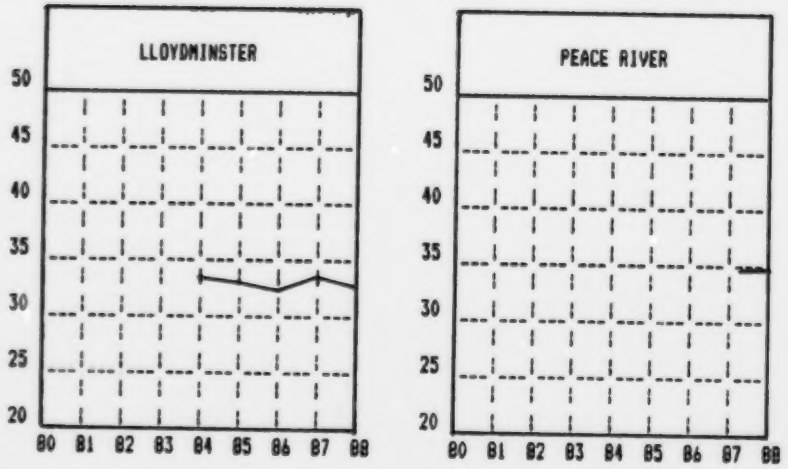
2.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA. 10 : Comparative Apartment Unit Cost Graphs 1980 -1988 (Inflation Adjusted Dollars)



2.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA. 10 : Comparative Apartment Unit Cost Graphs 1980 -1988 (Inflation Adjusted Dollars)



* Peace River not included in previous studies.

2.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA. 11 : Trade Division Cost Summaries

LOCATION	EDMONTON	CALGARY	RED DEER	FORT McMURRAY	GRANDE PRAIRIE	HINTON	LETHBRIDGE	MEDICINE HAT	LLOYD-MINSTER	PEACE RIVER
Divisions										
1. Excavation	2,681	4,275	3,421	3,978	3,480	2,861	3,642	3,125	3,686	3,480
2. Concrete	19,672	18,453	20,094	23,997	23,516	23,451	19,803	21,209	20,147	21,738
3. Damproofing	734	885	923	1,230	1,156	921	932	897	884	1,156
4. Siding	14,950	14,955	15,214	18,995	18,861	17,946	17,319	17,132	18,372	19,337
5. Roofing	25,080	26,269	26,321	33,575	28,070	27,140	25,612	26,380	28,370	28,572
6. Rough Carpentry	134,551	140,671	132,323	160,335	150,108	148,550	143,114	133,478	137,550	153,486
7. Finish Carpentry	10,459	11,207	10,332	11,653	10,835	9,720	10,062	10,051	10,313	11,399
8. Windows and Glazing	25,783	24,595	26,586	30,134	27,550	26,844	26,643	26,974	26,513	28,915
9. Sealants	855	895	850	912	917	862	857	869	877	917
10. Doors	41,666	39,538	41,751	44,717	45,660	44,525	42,079	41,102	43,227	46,666
11. Hardware	3,713	3,896	3,759	4,117	3,961	3,784	3,927	3,904	3,778	3,995
12. Ceramic Tiling	5,432	5,562	5,396	6,535	6,473	5,928	6,223	6,437	7,449	6,769
SUB - TOTAL	$285,576	$291,201	$286,970	$340,178	$320,587	$312,532	$300,213	$291,558	$301,166	$326,430

2.0 SUMMARY OF FINDINGS FOR THE WALK-UP APARTMENT

TABLE WA. 11 : Trade Division Cost Summaries (cont'd)

LOCATION	EDMONTON	CALGARY	RED DEER	FORT McMURRAY	GRANDE PRAIRIE	HINTON	LETHBRIDGE	MEDICINE HAT	LLOYD-MINSTER	PEACE RIVER
Divisions										
13. Wallboard	56,806	57,114	56,352	68,820	61,826	65,809	57,140	58,075	65,671	62,737
14. Flooring	47,448	48,464	48,598	52,922	51,264	49,250	49,399	50,865	49,302	52,418
15. Painting	19,958	19,673	21,883	23,779	23,176	22,813	23,195	23,700	22,971	23,387
16. Fitting	46,891	46,653	49,772	56,509	51,720	50,842	51,583	50,657	49,546	56,473
17. Specialties	17,553	17,853	17,656	19,315	19,100	18,071	17,745	18,409	17,974	19,458
18. Appliances	31,230	31,230	30,704	32,552	32,948	31,498	31,800	31,800	31,273	33,534
19. Plumbing	63,120	64,680	63,840	69,120	74,016	67,248	62,928	64,896	61,920	75,816
20. Heating	30,720	33,840	36,240	43,080	42,288	39,216	28,200	31,968	43,968	42,912
21. Ventilation	7,680	7,872	7,488	9,432	9,312	9,276	8,568	8,664	9,216	9,408
22. Fire Protection	2,280	2,160	2,112	2,688	2,688	2,688	2,184	2,256	2,784	2,784
23. Electrical	39,960	43,320	47,520	53,040	55,560	55,200	44,784	49,224	59,280	56,208
24. Site Overhead	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Subtotals - 1-24	$699,222	$714,060	$719,135	$821,435	$794,485	$774,443	$727,739	$732,072	$765,071	$811,564
25. Gnrl. Contr's Ovhd.& Profit	26,760	30,360	28,320	26,400	25,560	25,536	25,800	26,376	25,032	25,560
TOTAL	$725,982	$744,420	$747,455	$847,835	$820,045	$799,979	$753,539	$758,448	$790,103	$837,124

3.0 COMMENTARY

3.0 COMMENTARY

3.1 General

Alberta's economy experienced improvement in the first half of 1988. There was a positive migration of people into Alberta. Construction activity in the Province increased and the unemployment rate was down compared to the year previous. Increased housing starts province-wide proved indicative of a stabilizing economy. Timber pulp and paper projects have generated some activity, but the largest part of the impacts from these projects has yet to come. Most areas of the Province have seen upward movement of housing prices although weaker performances took place in smaller communities. Lot prices are up in most of the centres studied as a result of a reduced supply of lower priced lots.

Although apartment vacancy rates remained high and the rental market was weak in 1988, costs for apartment construction increased in all centres by an average of 3.0%. The greatest increase was 4.7% in Edmonton and the smallest increase was 1.6% in Lloydminster.

The graphic presentation of apartment construction costs in Table WA.8 indicates that average costs are higher than 1981 costs expressed in nominal dollars (from $ 31,529 in 1981 to $ 32,604 in 1988 or 3.4% more). Expressed in inflation adjusted 1988 dollars, the total average costs are 24.1% less than the 1981 costs, from $42,975 in 1981 to $32,604 in 1988.

Labour costs for apartment construction increased substantially in Edmonton, Medicine Hat and significantly in Calgary as these centres have experienced shortages of skilled labour. The other centres have also experienced some of the skilled labour shortage problems, but to a much lesser degree.

3.0 COMMENTARY

3.1 General (continued)

Material prices for the walk-up apartment building have increased in all centres, however, some prices used in this report may reflect seasonal adjustment such as the exclusion of costs of heating for concrete pouring in winter and also greater discounting offered by suppliers for the time of year studied. Most materials have also increased in price in response to the overall high demand caused by the higher housing starts in the Province. Concrete prices continue to vary considerably from centre to centre, due to demand, location and availability of aggregates and cement. In most centres the majority of price increases were passed on to consumers ; in previous years, builders have absorbed increases to remain competitive in the marketplace.

No significant changes were observed as a result of building practice changes or changes in standard materials used by the majority of builders.

3.0 COMMENTARY

3.2 Highlights by Centre

Edmonton :

The 1988 cost of the typical walk-up apartment in Edmonton is 2.5% lower than its Calgary counterpart and 4.7% higher than the 1987 Edmonton cost. Expressed in nominal dollars, the total cost is 1.6% higher than the 1981 cost. Expressed in inflation adjusted 1988 dollars, the total cost is 25.5% less than the 1981 cost. The overall increase in labour cost was 6.3% and the increase in material prices was 3.8% compared with 1987.

Shortages of skilled labour in Edmonton have forced prices to rise. Higher profit margins are being realized for some builders as they are experiencing a healthier marketplace. Edmonton's resale market is very active and housing starts increased substantially. However, vacancy rates in Edmonton have increased and may be attributed to the increased interest in the ownership markets; thus demand for rental accommodation lags and therefore the construction of apartment buildings is low.

Calgary :

The 1988 cost of the typical walk-up apartment in Calgary is 2.5% higher than its Edmonton counterpart and 2.7% higher than the 1987 Calgary cost. Expressed in nominal dollars, the total cost is 3.5% more than the 1981 cost. Expressed in inflation adjusted 1988 dollars, the total cost is 24.0% less than the 1981 cost. The overall increase in labour and material prices was 4.2% and 2.0% respectively compared with 1987.

Shortages of skilled labour in Calgary pushed costs upwards. Optimism remained as oil prices edged higher. Housing starts are up significantly and few lower priced lots exist.

3.0 COMMENTARY

3.2 Highlights by Centre (continued)

Red Deer :

The 1988 cost of the typical walk-up apartment in Red Deer is 0.4% higher than in Calgary and 3.0% than in Edmonton. The cost is 1.8% higher than the 1987 Red Deer cost. Expressed in nominal dollars, the total cost is 1.9% more than the 1981 cost. Expressed in inflation adjusted 1988 dollars, the total cost is 25.2% less than the 1981 cost. The overall increase in labour cost was 1.6% and the increase in material prices was 2.0% compared with 1987.

Some shortages of skilled labour are evident in Red Deer. Labour costs are up in a stablized market for new housing. Lot prices have increased significantly over the previous year.

Fort McMurray :

The 1988 cost of the typical walk-up apartment in Fort McMurray is 16.8% higher than that in Edmonton and 2.0% higher than the 1987 Fort McMurray cost. Expressed in nominal dollars, the total cost is 1.6% less than the 1981 cost. Expressed in inflation adjusted 1988 dollars, the cost is 27.8% less than the 1981 cost. The overall increase in labour and material prices was 0.8% and 2.7% respectively compared with 1987.

Fort McMurray has experienced levels of new construction activity similar to the previous year. Lot prices have generally remained unchanged for 1988. There have been recent indications that activity here is improving.

3.0 COMMENTARY

3.2 Highlights by Centre (continued)

Grande Prairie :

The 1988 cost of the typical walk-up apartment in Grande Prairie is 13.0% higher than in Edmonton and 3.7% higher than the 1987 Grande Prairie cost. Expressed in nominal dollars, the total cost is 4.5% more than the 1981 cost. Expressed in inflation adjusted 1988 dollars, the total cost is 23.3% less than the 1981 cost. The overall increase in labour and material prices was 3.5% and 3.8% respectively compared with 1987.

Grande Prairie has experienced a positive migration of people into the centre and pressure from demands for new housing is moving costs upwards. There isn't an immediate shortage of skilled labour at present, but builders expect this by the spring/summer of 1989.

Hinton :

The 1988 cost of the typical walk-up apartment in Hinton is 10.2% higher than in Edmonton and 3.0% higher than the 1987 Hinton cost. Expressed in nominal dollars, the total cost is 7.4% higher than the 1982* cost. Expressed in inflation adjusted 1988 dollars, the total cost is 12.9% less than the 1982* cost. Overall, labour prices in Hinton decreased 0.3% while material prices increased 4.9% compared with 1987.

Of the ten centres examined, Hinton is the smallest. Apart from the premiums on materials, skilled labour is not as readily available as elsewhere. Therefore, it is often necessary to pay certain skilled trades, such as mechanical and electrical, subsistence in the form of accommodation and travel allowances.

Hinton had very little new residential construction in 1988. Local industrial activity is keeping local builders/trades busy at present.

* 1982 has been selected as the base year as Hinton was not part of earlier studies.

3.0 COMMENTARY

3.2 Highlights by Centre (continued)

Lethbridge :

The 1988 cost of the typical walk-up apartment in Lethbridge is 1.2% higher than in Calgary and 3.4% higher than the 1987 Lethbridge cost. Expressed in nominal dollars, the total cost is 1.8% higher than the 1981 cost. Expressed in inflation adjusted 1988 dollars, the total cost is 25.3% less than the 1981 cost. The overall increase in labour and material prices was 1.4% and 4.5% respectively compared with 1987.

Lethbridge has experienced a competitive market through 1988. Along with higher material costs, builders are having to pay skilled labour more. Housing starts here are up slightly over the year previously.

Medicine Hat :

The 1988 cost of the typical walk-up apartment in Medicine Hat is 1.9% higher than in Calgary and 3.7% higher than the 1987 Medicine Hat cost. Expressed in nominal dollars, the total cost is 1.9% higher than the 1981 cost. Expressed in inflation adjusted 1988 dollars, the total cost is 25.2% less than the 1981 cost. The overall increase in labour cost was 5.4% and the increase in material prices was 2.8% compared with 1987.

As with Lethbridge, builders here have had to pay more for skilled labour, along with higher material costs. A very competitive marketplace exists and there is a low supply of housing available.

3.0 COMMENTARY

3.2 Highlights by Centre (continued)

Lloydminster :

The 1988 cost of the typical walk-up apartment in Lloydminster is 8.8% higher than in Edmonton and 1.6% higher than the 1987 Lloydminster cost. Expressed in nominal dollars, the total cost is 12.6% higher than the 1984* cost. Expressed in inflation adjusted 1988 dollars, the total cost is 1.5% less than the 1984* cost. The overall increase in labour cost was 1.5% and the increase in material price was 1.7% compared with 1987.

Lloydminster experienced a similar level of activity as the year previous with few new housing starts. The local oil upgrader project has not created any immediate impact on the area.

* 1984 has been selected as the base year as Lloydminster was not part of the earlier studies.

Peace River :

The 1988 cost of the typical walk-up apartment in Peace River is 15.3% higher than in Edmonton. This year is the first time that Peace River has been included in the Alberta House Cost Comparison Study.

Builders have indicated that activity had been similar to the year previous and relatively costs have generally remained unchanged. Trade availability is fine at present, but is expected to change as the local pulp mill project develops and higher demands for new housing is created.

4.0 DETAILED COST ESTIMATES BY TRADE DIVISION FOR EACH CENTRE

DETAILED COST ESTIMATES FOR EDMONTON

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

EDMONTON

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
1. EXCAVATION									
1.10	Excavate for basement, wall footings, and bases.	891	m3	0.47	419	0.84	748	1.31	1,167
1.20	Backfill to basement walls, footings, and bases.	188	m3	0.42	79	0.80	150	1.22	229
1.30	150 mm gravel or sand bed under slab on grade.	70	m3	3.23	226	6.60	462	9.83	688
1.40	.152 mm polyethylene vapour barrier on gravel or sand bed.	501	m2	0.89	446	0.30	150	1.19	596
	SUBTOTAL - EXCAVATION	1.44	/m2 GFA		1,170		1,511		2,681
2. CONCRETE									
2.10	25 MPa concrete in footings and basement walls (material only) 200 mm reinforced concrete wall, 250 x 560 mm reinforced concrete footing.	58	m3	0.00	0	105.00	6,090	105.00	6,090
2.20	Reinforcing steel in footings and basement walls (material only).	1,652	kg	0.00	0	0.75	1,239	0.75	1,239
2.30	Form, place rebar and pour concrete in footing (560 x 250 mm) -subcontract	222	m	6.50	1,443	1.91	424	8.41	1,867

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

EDMONTON

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
2.35	Form, place rebar, and pour concrete in basement wall (1.2 m high) (subcontract)	96	m	18.67	1,792	5.95	571	24.62	2,364
2.40	90 mm concrete (20 MPa) in slab on grade.	456	m2	3.86	1,760	8.48	3,867	12.34	5,627
2.45	150 x 150 mm welded wire mesh reinforcement to slab on grade (material only).	456	m2	0.00	0	3.03	1,382	3.03	1,382
2.55	38 mm thick rigid insulation to concrete wall (basement).	117	m2	2.24	262	4.20	491	6.44	753
2.60	Parging to concrete walls.	29	m2	9.10	264	2.98	86	12.08	350
	SUBTOTAL - CONCRETE	10.59	/m2 GFA		5,521		14,151		19,672
3.	DAMPROOFING								
3.10	Two coats asphaltic emulsion on concrete walls.	159	m2	0.30	48	0.30	48	0.60	95
3.20	100 mm perforated plastic weeping tile in crushed gravel surround.	96	m	2.79	268	3.86	371	6.65	638
	SUBTOTAL - DAMPROOFING	0.40	/m2 GFA		316		418		734
4.	SIDING								
4.10	Prefinished aluminum siding	98	m2	4.74	465	15.95	1,563	20.69	2,028

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

EDMONTON

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
4.40	Stained dark-brown cedar siding 25 x 150 mm channel to column.	700	FBM	0.78	546	1.16	812	1.94	1,358
4.50	Stucco on wire mesh incl. building paper.	678	m2	10.37	7,031	5.40	3,661	15.77	10,692
4.60	24 ga. aluminum vented metal soffit c/w edge moulding.	59	m2	4.50	266	10.28	607	14.78	872
	SUBTOTAL - SIDING	8.05	/m2 GFA		8,307		6,643		14,950
5.	ROOFING/SHEET METAL								
5.10	Built-up asphalt roofing completed with mineral granular and flashing.	527	m2	19.70	10,382	16.87	8,890	36.57	19,272
5.30	R.S.I. 6 (R34) batt insulation in joist space.	527	m2	1.80	949	8.13	4,285	9.93	5,233
5.40	.102 mm polyethylene vapour barrier.	580	m2	0.27	157	0.22	128	0.49	284
5.50	Prefinished flashing over window.	66	m	1.39	92	3.01	199	4.40	290
	SUBTOTAL - ROOFING/SHEET METAL	13.51	/m2 GFA		11,579		13,501		25,080

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

EDMONTON

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6. CARPENTRY (ROUGH)								
6.10 Material Only No. 2 grade fir or spruce as below floor joists (38 x 235 mm) - fir built-up beam (3-38 x 235 mm) - fir built-up beam (2-38 x 235 mm) - fir roof joist (38 x 235 mm) - spruce	38.0	MFBM	0.00	0	771.23	29,307	771.23	29,307
6.20 Material Only No. 2 grade fir or spruce as below framing (38 x140 mm) - fir plate (38 x 140 mm) - fir cross bridging (38 x 38 mm) - spruce framing (38 x 89 mm) - spruce framing (38 x 140 mm) - spruce blocking (38 x 89 mm) - spruce blocking (38 x 140 mm) - spruce wall strapping (38 x 38 mm) - spruce fascia (19 x 140 mm) - spruce	44.0	MFBM	0.00	0	578.90	25,472	578.90	25,472
6.30 Material Only - Sheathing 19 mm plywood (floor underlay) 1432 m2 13 mm tentest (u/s of joist) 1368 m2 10 mm plywood (roof sheathing) 524 m2 13 mm plywood (wall sheathing - protection board 350mm high) 19 m2 8 mm plywood (wall sheathing) 727 m2	4,070	m2	0.00	0	8.22	33,455	8.22	33,455
6.40 Labour Only - complete framing including installation of windows.	1,857	m2	24.88	46,202	0.00	0	24.88	46,202

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

EDMONTON

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6.50	90 x 238 mm wide R.S.I. 2.1 (R12) batt insulation (vertical eaves).	99	m	0.46	46	0.70	69	1.16	115
	SUBTOTAL - CARPENTRY (ROUGH)	72.46	/m2 GFA		46,248		88,303		134,551
7.	CARPENTRY (FINISH)								
7.10	Stair - 6 flights @ (2x6x8 = 96 risers)								
	38 x 300 mm stringers 59 m								
	38 x 235 mm treads 103 m								
	6 x 275 mm fir plywood in risers 115 m	2	No.	568.00	1,136	370.00	740	938.00	1,876
7.30	Select grade fir in window and door trim and base (40 x 12 mm)								
	- window 431 m								
	- door 555 m								
	- base 2328 m	3,314	m	1.50	4,971	1.09	3,612	2.59	8,583
	SUBTOTAL - CARPENTRY (FINISH)	5.63	/m2 GFA		6,107		4,352		10,459
8.	WINDOWS AND GLAZING								
8.10	Double-glazed patio door in wood frame with aluminum cladding and including hardware (size 2.4 x 1.8 m).	18	No.	0.00	0	870.00	15,660	870.00	15,660
8.20	Double-glazed wired glass sealed window in steel frame (size 2.4 x2.55 m).	4	No.	0.00	0	880.00	3,520	880.00	3,520
8.30	Double-glazed sliding units in wood frame (size 2.4 x .9 m) including aluminum sliders, screen, and hardware.	6	No.	0.00	0	248.00	1,488	248.00	1,488

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

EDMONTON

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
8.40	Double-glazed sliding units in wood frame (size 1.5 x .9 m) including aluminum sliders, screen, and hardware.	28	No.	0.00	0	168.00	4,704	168.00	4,704
8.50	Double-glazed sliding units in wood frame (size .9 x .9 m) including aluminum sliders, screen, and hardware.	3	No.	0.00	0	137.00	411	137.00	411
	SUBTOTAL - WINDOWS AND GLAZING	13.88	/m2 GFA		0		25,783		25,783
9.	SEALANTS								
9.10	Caulk (exterior) (exterior doors, windows, junction of siding and concrete).	725	m	0.41	297	0.25	181	0.66	479
9.20	Caulk (interior) - ceramic tile	227	m	1.07	243	0.59	134	1.66	377
	SUBTOTAL - SEALANTS	0.46	/m2 GFA		540		315		855
10.	Doors								
10.03	Exterior - Aluminum entrance and sidelight, (size 2.4 x 2.1 m overall) including .9 x 2.1 m aluminum glazed door c/w door closer, push and pull, lock and aluminum threshold.	3	No	243.00	729	1,640.00	4,920	1,883.00	5,649

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

EDMONTON

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
10.06 Fire rated door and sidelight with 0.9 x 2.1 m, 20 min. label wood door and pressed steel frame including hardware and 6 mm wire glass to sidelight - 4 No. 1.9 x 2.1 m - 4 No. 1.4 x 2.1 m	8	No.	195.00	1,560	1,140.00	9,120	1,335.00	10,680
10.09 Solid core door and frame, rotary cut mahogany - 24 No. .9x2.1mx44mm (20 min. label) - 26 No. .85 x 2.1m x 44mm	50	No.	23.00	1,150	205.00	10,250	228.00	11,400
10.10 Solid core door and frame, rotary cut mahogany - 1 No. .9x2.1mx44mm (45 min. label)	1	No.	23.00	23	250.00	250	273.00	273
10.20 Hollow core door and frame, rotary cut mahogany face - 24 No. .70 x 2.0 m x 35mm - 24 No. .75 x 2.0 m x 35mm	48	No.	12.50	600	38.99	1,872	51.49	2,472
10.25 Metal door labelled (1 hour) c/w fire rated pressed steel frame - 1 No. .9 x 2.1 m x 45 mm	1	No.	23.00	23	210.00	210	233.00	233

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

EDMONTON

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
10.30 Metal folding bi-fold doors, with tracks and pulls - 28 No. 1.8 x 2.0 m - 14 No. 1.5 x 2.0 m - 6 No. 1.2 x 2.0 m - 14 No. 0.9 x 2.0 m - 16 No. 0.6 x 2.0 m	78	No.	12.50	975	128.00	9,984	140.50	10,959
SUBTOTAL - DOORS	22.44	/m2 GFA		5,060		36,606		41,666
11. HARDWARE								
11.15 Lock sets to interior doors.	25	set	11.75	294	24.45	611	36.20	905
11.25 Butts to interior doors. (included with frames)	129	pair	0.00	0	0.00	0	0.00	0
11.30 Latch sets.	81	set	7.60	616	12.99	1,052	20.59	1,668
11.40 Bathroom privacy latch sets.	24	set	7.60	182	14.99	360	22.59	542
11.50 Door closers (rated).	14	No.	13.75	193	29.00	406	42.75	599
SUBTOTAL - HARDWARE	2.00	/m2 GFA		1,284		2,429		3,713
12. CERAMIC TILING								
12.10 Ceramic tile 100 x 100 x 6 mm thinset on drywall.	137	m2	22.25	3,048	17.40	2,384	39.65	5,432
SUBTOTAL - CERAMIC TILING	2.93	/m2 GFA		3,048		2,384		5,432

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

EDMONTON

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13. WALLBOARD								
13.10 Gypsum wallboard (13mm standard) on walls, taped and sanded.	3,906	m2	2.62	10,234	2.18	8,515	4.80	18,749
13.13 Gypsum wallboard (13mm fire rated) taped and sanded.								
- walls 705 m2								
- stair soffit 29 m2	734	m2	2.80	2,055	2.60	1,908	5.40	3,964
13.14 Gypsum wallboard (15.9 mm thick), taped and sanded.	487	m2	2.80	1,364	3.15	1,534	5.95	2,898
13.15 Gypsum wallboard (15.9mm fire rated) to shaft enclosure, taped and sanded.	63	m2	5.23	329	3.35	211	8.58	541
13.16 Gypsum wallboard (15.9mm fire rated with sound barrier) on ceiling, taped and sanded.	1,887	m2	4.02	7,586	3.69	6,963	7.71	14,549
13.17 2 layers gypsum wallboard (15.9mm fire rated with sound barrier) on ceiling,taped and sanded.	4	m2	5.95	24	7.41	30	13.36	53
13.30 Tentest board, Crane 3-183 Redcliffe	524	m2	4.25	2,227	3.16	1,656	7.41	3,883
13.40 Finish to ceilings - textured	1,425	m2	1.18	1,682	1.10	1,568	2.28	3,249

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

EDMONTON

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13.70 .102 mm polyethylene vapour barrier.	1,346	m2	0.27	363	0.22	296	0.49	660
13.83 Batt insulation RSI - 3.5 (R20) to exterior walls.	728	m2	0.85	619	4.20	3,058	5.05	3,676
13.86 Batt insulation RSI - 3.5 (R20) to interior walls.	908	m2	0.85	772	4.20	3,814	5.05	4,585
SUBTOTAL - WALLBOARD	30.59	/m2 GFA		27,254		29,552		56,806
14. FLOORING								
14.10 Sheet vinyl flooring (.065 gauge) with adhesive to subfloor.	364	m2	5.73	2,086	11.94	4,346	17.67	6,432
14.20 20 oz, 100% Nylon carpet c/w 13 mm thick chip foam underlay.	1,296	m2	3.30	4,277	14.30	18,533	17.60	22,810
14.30 'Neoprene Hypalon' waterproofing or equal to balcony.	67	m2	16.85	1,129	22.05	1,477	38.90	2,606
14.40 Gypcrete floor topping including steel trowel finish.	1,338	m2	7.71	10,316	3.95	5,285	11.66	15,601
SUBTOTAL - FLOORING	25.55	/m2 GFA		17,807		29,641		47,448
15. PAINTING								
15.12 Exterior work - Prepare, prime, two coats enamel on fascia board to balconies and entrance canopy.	26	m2	4.18	109	1.20	31	5.38	140

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

EDMONTON

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
15.14 Prepare, prime, two coats enamel on metal handrail and balustrade.	783	m	1.48	1,159	0.92	720	2.40	1,879
15.22 Interior work - Prepare, one coat primer sealer, one coat latex or semigloss paint on gypsum wallboard - walls 4962 m2 - ceiling 234 m2	5,196	m2	1.80	9,353	0.66	3,429	2.46	12,782
15.30 Two coats urethane varnish on doors and frames.	105	No.	20.00	2,100	5.98	628	25.98	2,728
15.40 Prepare, prime, one coat semigloss on base, door and window trim.	2,328	m	0.77	1,793	0.17	396	0.94	2,188
15.50 Prepare, prime, one coat semigloss on shelving.	94	m2	2.10	197	0.46	43	2.56	241
SUBTOTAL - PAINTING	10.75	/m2 BFA		14,710		5,248		19,958
16. FITTINGS								
16.10 Shelving - Douglas fir plywood, lipped one edge (20 mm thick x .45 m)	107	m	3.65	391	5.40	578	9.05	968

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

EDMONTON

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
16.20 Vanity and cabinets, plastic laminated top to lower cabinets and c/w drawers, shelves, etc.								
- lower vanity and cupboard	27	m						
- wall units	99	m						
- worktop unit	69	m						
	195	m	30.50	5,948	205.00	39,975	235.50	45,923
SUBTOTAL - FITTINGS	25.25	/m2 GFA		6,338		40,553		46,891
17. SPECIALTIES								
17.10 Washroom accessories - 24 No. toilet paperholders - 24 No. soap dishes - 48 No. towel bars	96	No.	5.05	485	8.80	845	13.85	1,330
17.20 Medicine cabinet	24	No.	9.85	236	58.95	1,415	68.80	1,651
17.30 25 mm dia. chrome shower curtain rod.	24	No.	5.45	131	6.49	156	11.94	287
17.40 Mail box and house numbers (size .81 x .45 m) for 24 apts.	1	set	60.00	60	405.00	405	465.00	465
17.50 18 mm dia. chrome coat rods.	24	No.	3.30	79	4.81	115	8.11	195
17.60 Drapery tracks.	102	m	3.32	339	8.52	869	11.84	1,208

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

EDMONTON

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
17.70 970 mm high metal balustrade to balconies c/w balusters 100 mm o.c.	98	m	10.95	1,073	43.70	4,283	54.65	5,356
17.80 Metal balustrade to stairs c/w vinyl cap.	66	m	10.95	723	38.58	2,546	49.53	3,269
17.90 50 mm dia. pipe handrail and brackets.	54	m	24.25	1,310	46.00	2,484	70.25	3,794
SUBTOTAL - SPECIALTIES	9.45	/m2 GFA		4,435		13,118		17,553
18. APPLIANCES								
18.10 Freestanding range, 760 mm (30") top four surface elements, oven auto timer.	24	No.	16.50	396	539.00	12,936	555.50	13,332
18.20 Electric refrigerator, manual defrost .37 m3 (13 cu. ft.) capacity	24	No.	16.50	396	499.00	11,976	515.50	12,372
18.30 Range hood	24	No.	16.50	396	91.00	2,184	107.50	2,580
18.40 Coin operated dryer.	2	No.	16.50	33	625.00	1,250	641.50	1,283
18.50 Coin operated washer.	2	No.	16.50	33	815.00	1,630	831.50	1,663
SUBTOTAL - APPLIANCES	16.82	/m2 GFA		1,254		29,976		31,230

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

EDMONTON

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
19. PLUMBING								
19.10 Complete plumbing including : -24 No. water closets -32 No. lavatory basins -24 No. baths (5') - 1 No. mop service basin - 1 No. laundry tub (The above Crane or equal) -24 No. kitchen sinks, compartment, stainless steel. - 1 No. water heater and storage tank, cap. 300 MBH - 1 No. domestic hot water recirculating pump and accessories. - rough-in, waste and vent - roof drains	24	apt.	680.00	16,320	1,950.00	46,800	2,630.00	63,120
SUBTOTAL - PLUMBING	33.99	/m2 GFA		16,320		46,800		63,120
20. HEATING								
20.10 Hot water circulation system (268 m total length) c/w radiators, 24 control valves, one centrifugal circulation pump, complete with all piping, 50 gallon expansion tank, hot water heating boiler and gas supply system.	24	apt.	390.00	9,360	890.00	21,360	1,280.00	30,720
SUBTOTAL - HEATING	16.54	/m2 GFA		9,360		21,360		30,720

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

EDMONTON

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
21. VENTILATION								
21.10 Ventilation system, complete for 24-unit apartment building with all ductwork and fans.	24	apt.	80.00	1,920	240.00	5,760	320.00	7,680
SUBTOTAL - VENTILATION	4.14	/m2 GFA		1,920		5,760		7,680
22. FIRE PROTECTION								
22.10 Fire protection system, complete for 24-unit apartment building.	24	apt.	34.00	816	61.00	1,464	95.00	2,280
SUBTOTAL - FIRE PROTECTION	1.23	/m2 GFA		816		1,464		2,280
23. ELECTRICAL								
23.10 Complete electrical installation including fixture supply: fixtures, receptacles and connections for TV, phone and razor; vent fan, door-bell with two presses, 100 A service board and fire alarm system (includes for elect. fixtures.)	24	apt.	565.00	13,560	1,100.00	26,400	1,665.00	39,960
SUBTOTAL - ELECTRICAL	21.52	/m2 GFA		13,560		26,400		39,960

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

EDMONTON

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
24. SITE OVERHEADS								
24.10 Site Overheads								
- setup								
- supervision								
- plant								
- site office								
- small tools								
- security								
- boarding, etc.	24	apt.	1,388.00	33,312	695.35	16,688	2,083.35	50,000
SUBTOTAL - SITE OVERHEADS	26.93	/m2 GFA		33,312		16,688		50,000
25. GENERAL CONTRACTOR'S OVERHEADS & PROFIT								
25.10 General Contractor's Overhead & Profit								
- permits								
- bonds								
- insurance								
- office overhead								
- profit	24	apt.	735.00	17,640	380.00	9,120	1,115.00	26,760
SUBTOTAL - GEN.CONTRACTOR'S OH.& PROFIT	14.41	/m2 GFA		17,640		9,120		26,760
TOTAL - EDMONTON	390.94	/m2 GFA		253,906		472,076		725,982

DETAILED COST ESTIMATES FOR CALGARY

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

CALGARY

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
1. EXCAVATION									
1.10	Excavate for basement, wall footings, and bases.	891	m3	0.54	481	1.80	1,604	2.34	2,085
1.20	Backfill to basement walls, footings, and bases.	188	m3	0.42	79	1.36	256	1.78	335
1.30	150 mm gravel or sand bed under slab on grade.	70	m3	3.47	243	14.16	991	17.63	1,234
1.40	.152 mm polyethylene vapour barrier on gravel or sand bed.	501	m2	0.92	461	0.32	160	1.24	621
	SUBTOTAL - EXCAVATION	2.30	/m2 GFA		1,264		3,011		4,275
2. CONCRETE									
2.10	25 MPa concrete in footings and basement walls (material only) 200 mm reinforced concrete wall, 250 x 560 mm reinforced concrete footing.	58	m3	0.00	0	93.00	5,394	93.00	5,394
2.20	Reinforcing steel in footings and basement walls (material only).	1,652	kg	0.00	0	0.80	1,322	0.80	1,322
2.30	Form, place rebar and pour concrete in footing (560 x 250 mm) -subcontract	222	m	6.30	1,399	1.75	389	8.05	1,787

1988 ALBERTA HOUSE COST COMPARISON STUDY

SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

CALGARY

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
2.35	Form, place rebar, and pour concrete in basement wall (1.2 m high) (subcontract)	96	m	17.90	1,718	6.90	662	24.80	2,381
2.40	90 mm concrete (20 MPa) in slab on grade.	456	m2	3.92	1,788	7.06	3,219	10.98	5,007
2.45	150 x 150 mm welded wire mesh reinforcement to slab on grade (material only).	456	m2	0.00	0	3.12	1,423	3.12	1,423
2.55	38 mm thick rigid insulation to concrete wall (basement).	117	m2	2.29	268	4.21	493	6.50	761
2.60	Parging to concrete walls.	29	m2	9.74	282	3.35	97	13.09	380
	SUBTOTAL - CONCRETE	9.94	/m2 GFA		5,455		12,998		18,453
3.	DAMPROOFING								
3.10	Two coats asphaltic emulsion on concrete walls.	159	m2	0.41	65	0.35	56	0.76	121
3.20	100 mm perforated plastic weeping tile in crushed gravel surround.	96	m	3.92	376	4.04	388	7.96	764
	SUBTOTAL - DAMPROOFING	0.48	/m2 GFA		442		443		885
4.	SIDING								
4.10	Prefinished aluminum siding	98	m2	5.13	503	13.30	1,303	18.43	1,806

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

CALGARY

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
4.40	Stained dark-brown cedar siding 25 x 150 mm channel to column.	700	FBM	0.78	546	1.32	924	2.10	1,470
4.50	Stucco on wire mesh incl. building paper.	678	m2	10.56	7,160	5.40	3,661	15.96	10,821
4.60	24 ga. aluminum vented metal soffit c/w edge moulding.	59	m2	4.65	274	9.89	584	14.54	858
	SUBTOTAL - SIDING	8.05	/m2 GFA		8,483		6,472		14,955
5.	ROOFING/SHEET METAL								
5.10	Built-up asphalt roofing completed with mineral granular and flashing.	527	m2	20.69	10,904	17.99	9,481	38.68	20,384
5.30	R.S.I. 6 (R34) batt insulation in joist space.	527	m2	1.80	949	8.13	4,285	9.93	5,233
5.40	.102 mm polyethylene vapour barrier.	580	m2	0.33	191	0.29	168	0.62	360
5.50	Prefinished flashing over window.	66	m	1.42	94	3.01	199	4.43	292
	SUBTOTAL - ROOFING/SHEET METAL	14.15	/m2 GFA		12,137		14,132		26,269

1988 ALBERTA HOUSE COST COMPARISON STUDY

SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

CALGARY

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6. CARPENTRY (ROUGH)								
6.10 Material Only No. 2 grade fir or spruce as below floor joists (38 x 235 mm) - fir built-up beam (3-38 x 235 mm) - fir built-up beam (2-38 x 235 mm) - fir roof joist (38 x 235 mm) - spruce	38.0	MFBM	0.00	0	790.00	30,020	790.00	30,020
6.20 Material Only No. 2 grade fir or spruce as below framing (38 x140 mm) - fir plate (38 x 140 mm) - fir cross bridging (38 x 38 mm) - spruce framing (38 x 89 mm) - spruce framing (38 x 140 mm) - spruce blocking (38 x 89 mm) - spruce blocking (38 x 140 mm) - spruce wall strapping (38 x 38 mm) - spruce fascia (19 x 140 mm) - spruce	44.0	MFBM	0.00	0	608.00	26,752	608.00	26,752
6.30 Material Only - Sheathing 19 mm plywood (floor underlay) 1432 m2 13 mm tentest (u/s of joist) 1368 m2 10 mm plywood (roof sheathing) 524 m2 13 mm plywood (wall sheathing - protection board 350mm high) 19 m2 8 mm plywood (wall sheathing) 727 m2	4,070	m2	0.00	0	8.95	36,427	8.95	36,427
6.40 Labour Only - complete framing including installation of windows.	1,857	m2	25.50	47,354	0.00	0	25.50	47,354

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

CALGARY

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6.50	90 x 238 mm wide R.S.I. 2.1 (R12) batt insulation (vertical eaves).	99	m	0.48	48	0.72	71	1.20	119
	SUBTOTAL - CARPENTRY (ROUGH)	75.75	/m2 GFA		47,401		93,270		140,671
7.	CARPENTRY (FINISH)								
7.10	Stair - 6 flights @ (2x6x8 = 96 risers)								
	38 x 300 mm stringers 59 m								
	38 x 235 mm treads 103 m								
	6 x 275 mm fir plywood in risers 115 m	2	No.	574.00	1,148	390.00	780	964.00	1,928
7.30	Select grade fir in window and door trim and base (40 x 12 mm)								
	- window 431 m								
	- door 555 m								
	- base 2328 m	3,314	m	1.60	5,302	1.20	3,977	2.80	9,279
	SUBTOTAL - CARPENTRY (FINISH)	6.04	/m2 GFA		6,450		4,757		11,207
8.	WINDOWS AND GLAZING								
8.10	Double-glazed patio door in wood frame with aluminum cladding and including hardware (size 2.4 x 1.8 m).	18	No.	0.00	0	810.00	14,580	810.00	14,580
8.20	Double-glazed wired glass sealed window in steel frame (size 2.4 x2.55 m).	4	No.	0.00	0	860.00	3,440	860.00	3,440
8.30	Double-glazed sliding units in wood frame (size 2.4 x .9 m) including aluminum sliders, screen, and hardware.	6	No.	0.00	0	248.00	1,488	248.00	1,488

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

CALGARY

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
8.40	Double-glazed sliding units in wood frame (size 1.5 x .9 m) including aluminum sliders, screen, and hardware.	28	No.	0.00	0	167.00	4,676	167.00	4,676
8.50	Double-glazed sliding units in wood frame (size .9 x .9 m) including aluminum sliders, screen, and hardware.	3	No.	0.00	0	137.00	411	137.00	411
	SUBTOTAL - WINDOWS AND GLAZING	13.24	/m2 GFA		0		24,595		24,595
9.	SEALANTS								
9.10	Caulk (exterior) (exterior doors, windows, junction of siding and concrete).	725	m	0.41	297	0.27	196	0.68	493
9.20	Caulk (interior) - ceramic tile	227	m	1.17	266	0.60	136	1.77	402
	SUBTOTAL - SEALANTS	0.48	/m2 GFA		563		332		895
10.	Doors								
10.03	Exterior - Aluminum entrance and sidelight, (size 2.4 x 2.1 m overall) including .9 x 2.1 m aluminum glazed door c/w door closer, push and pull, lock and aluminum threshold.	3	No	222.00	666	1,507.00	4,521	1,729.00	5,187

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

CALGARY

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
10.06 Fire rated door and sidelight with 0.9 x 2.1 m, 20 min. label wood door and pressed steel frame including hardware and 6 mm wire glass to sidelight - 4 No. 1.9 x 2.1 m - 4 No. 1.4 x 2.1 m	8	No.	185.00	1,480	1,086.00	8,688	1,271.00	10,168
10.09 Solid core door and frame, rotary cut mahogany - 24 No. .9x2.1mx44mm (20 min. label) - 26 No. .85 x 2.1m x 44mm	50	No.	22.00	1,100	187.00	9,350	209.00	10,450
10.10 Solid core door and frame, rotary cut mahogany - 1 No. .9x2.1mx44mm (45 min. label)	1	No.	22.00	22	230.00	230	252.00	252
10.20 Hollow core door and frame, rotary cut mahogany face - 24 No. .70 x 2.0 m x 35mm - 24 No. .75 x 2.0 m x 35mm	48	No.	13.00	624	38.99	1,872	51.99	2,496
10.25 Metal door labelled (1 hour) c/w fire rated pressed steel frame - 1 No. .9 x 2.1 m x 45 mm	1	No.	22.00	22	199.00	199	221.00	221

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

CALGARY

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
10.30 Metal folding bi-fold doors, with tracks and pulls - 28 No. 1.8 x 2.0 m - 14 No. 1.5 x 2.0 m - 6 No. 1.2 x 2.0 m - 14 No. 0.9 x 2.0 m - 16 No. 0.6 x 2.0 m	78	No.	13.00	1,014	125.00	9,750	138.00	10,764
SUBTOTAL - DOORS	21.29	/m2 GFA		4,928		34,610		39,538
11. HARDWARE								
11.15 Lock sets to interior doors.	25	set	13.00	325	24.78	620	37.78	945
11.25 Butts to interior doors. (included with frames)	129	pair	0.00	0	0.00	0	0.00	0
11.30 Latch sets.	81	set	9.00	729	12.99	1,052	21.99	1,781
11.40 Bathroom privacy latch sets.	24	set	9.00	216	14.99	360	23.99	576
11.50 Door closers (rated).	14	No.	14.50	203	28.00	392	42.50	595
SUBTOTAL - HARDWARE	2.10	/m2 GFA		1,473		2,423		3,896
12. CERAMIC TILING								
12.10 Ceramic tile 100 x 100 x 6 mm thinset on drywall.	137	m2	22.90	3,137	17.70	2,425	40.60	5,562
SUBTOTAL - CERAMIC TILING	3.00	/m2 GFA		3,137		2,425		5,562

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

CALGARY

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13. WALLBOARD								
13.10 Gypsum wallboard (13mm standard) on walls, taped and sanded.	3,906	m2	2.62	10,234	2.18	8,515	4.80	18,749
13.13 Gypsum wallboard (13mm fire rated) taped and sanded.								
- walls 705 m2								
- stair soffit 29 m2	734	m2	2.80	2,055	2.47	1,813	5.27	3,868
13.14 Gypsum wallboard (15.9 mm thick), taped and sanded.	487	m2	2.80	1,364	3.15	1,534	5.95	2,898
13.15 Gypsum wallboard (15.9mm fire rated) to shaft enclosure, taped and sanded.	63	m2	5.23	329	3.35	211	8.58	541
13.16 Gypsum wallboard (15.9mm fire rated with sound barrier) on ceiling, taped and sanded.	1,887	m2	4.02	7,586	3.49	6,586	7.51	14,171
13.17 2 layers gypsum wallboard (15.9mm fire rated with sound barrier) on ceiling,taped and sanded.	4	m2	5.72	23	7.02	28	12.74	51
13.30 Tentest board, Crane 3-183 Redcliffe	524	m2	3.77	1,975	3.02	1,582	6.79	3,558
13.40 Finish to ceilings - textured	1,425	m2	1.24	1,767	1.19	1,696	2.43	3,463

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

CALGARY

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13.70 .102 mm polyethylene vapour barrier.	1,346	m2	0.33	444	0.29	390	0.62	835
13.83 Batt insulation RSI - 3.5 (R20) to exterior walls.	728	m2	1.08	786	4.41	3,210	5.49	3,997
13.86 Batt insulation RSI - 3.5 (R20) to interior walls.	908	m2	1.08	981	4.41	4,004	5.49	4,985
SUBTOTAL - WALLBOARD	30.76	/m2 GFA		27,544		29,570		57,114
14. FLOORING								
14.10 Sheet vinyl flooring (.065 gauge) with adhesive to subfloor.	364	m2	6.04	2,199	12.40	4,514	18.44	6,712
14.20 20 oz, 100% Nylon carpet c/w 13 mm thick chip foam underlay.	1,296	m2	3.78	4,899	15.10	19,570	18.88	24,468
14.30 'Neoprene Hypalon' waterproofing or equal to balcony.	67	m2	16.50	1,106	21.80	1,461	38.30	2,566
14.40 Gypcrete floor topping including steel trowel finish.	1,338	m2	7.30	9,767	3.70	4,951	11.00	14,718
SUBTOTAL - FLOORING	26.10	/m2 GFA		17,970		30,494		48,464
15. PAINTING								
15.12 Exterior work - Prepare, prime, two coats enamel on fascia board to balconies and entrance canopy.	26	m2	4.05	105	1.12	29	5.17	134

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

CALGARY

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
15.14 Prepare, prime, two coats enamel on metal handrail and balustrade.	783	m	1.40	1,096	0.87	681	2.27	1,777
15.22 Interior work - Prepare, one coat primer sealer, one coat latex or semigloss paint on gypsum wallboard - walls 4962 m2 - ceiling 234 m2	5,196	m2	1.83	9,509	0.66	3,429	2.49	12,938
15.30 Two coats urethane varnish on doors and frames.	105	No.	20.00	2,100	5.53	581	25.53	2,681
15.40 Prepare, prime, one coat semigloss on base, door and window trim.	2,328	m	0.68	1,583	0.14	326	0.82	1,909
15.50 Prepare, prime, one coat semigloss on shelving.	94	m2	2.08	196	0.40	38	2.48	233
SUBTOTAL - PAINTING	10.59	/m2 GFA		14,589		5,084		19,673
16. FITTINGS								
16.10 Shelving - Douglas fir plywood, lipped one edge (20 mm thick x .45 m)	107	m	4.11	440	5.72	612	9.83	1,052

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

CALGARY

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
16.20 Vanity and cabinets, plastic laminated top to lower cabinets and c/w drawers, shelves, etc.								
- lower vanity and cupboard	27	m						
- wall units	99	m						
- worktop unit	69	m						
	195	m	30.85	6,016	203.00	39,585	233.85	45,601
SUBTOTAL - FITTINGS	25.12	/m2 GFA		6,456		40,197		46,653
17. SPECIALTIES								
17.10 Washroom accessories								
- 24 No. toilet paperholders								
- 24 No. soap dishes								
- 48 No. towel bars	96	No.	5.56	534	9.06	870	14.62	1,404
17.20 Medicine cabinet	24	No.	11.00	264	62.50	1,500	73.50	1,764
17.30 25 mm dia. chrome shower curtain rod.	24	No.	5.60	134	6.60	158	12.20	293
17.40 Mail box and house numbers (size .81 x .45 m) for 24 apts.	1	set	60.00	60	395.00	395	455.00	455
17.50 18 mm dia. chrome coat rods.	24	No.	3.95	95	5.50	132	9.45	227
17.60 Drapery tracks.	102	m	3.38	345	8.72	889	12.10	1,234

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

CALGARY

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
17.70 970 mm high metal balustrade to balconies c/w balusters 100 mm o.c.	98	m	11.30	1,107	43.80	4,292	55.10	5,400
17.80 Metal balustrade to stairs c/w vinyl cap.	66	m	11.30	746	38.76	2,558	50.06	3,304
17.90 50 mm dia. pipe handrail and brackets.	54	m	24.25	1,310	45.63	2,464	69.88	3,774
SUBTOTAL - SPECIALTIES	9.61	/m2 GFA		4,594		13,259		17,853
18. APPLIANCES								
18.10 Freestanding range, 760 mm (30") top four surface elements, oven auto timer.	24	No.	16.50	396	539.00	12,936	555.50	13,332
18.20 Electric refrigerator, manual defrost .37 m3 (13 cu. ft.) capacity	24	No.	16.50	396	499.00	11,976	515.50	12,372
18.30 Range hood	24	No.	16.50	396	91.00	2,184	107.50	2,580
18.40 Coin operated dryer.	2	No.	16.50	33	625.00	1,250	641.50	1,283
18.50 Coin operated washer.	2	No.	16.50	33	815.00	1,630	831.50	1,663
SUBTOTAL - APPLIANCES	16.82	/m2 GFA		1,254		29,976		31,230

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

CALGARY

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
19. PLUMBING								
19.10 Complete plumbing including : -24 No. water closets -32 No. lavatory basins -24 No. baths (5') - 1 No. mop service basin - 1 No. laundry tub (The above Crane or equal) -24 No. kitchen sinks, compartment, stainless steel. - 1 No. water heater and storage tank, cap. 300 MBH - 1 No. domestic hot water recirculating pump and accessories. - rough-in, waste and vent - roof drains	24	apt.	705.00	16,920	1,990.00	47,760	2,695.00	64,680
SUBTOTAL - PLUMBING	34.83	/m2 GFA		16,920		47,760		64,680
20. HEATING								
20.10 Hot water circulation system (268 m total length) c/w radiators, 24 control valves, one centrifugal circulation pump, complete with all piping, 50 gallon expansion tank, hot water heating boiler and gas supply system.	24	apt.	450.00	10,800	960.00	23,040	1,410.00	33,840
SUBTOTAL - HEATING	18.22	/m2 GFA		10,800		23,040		33,840

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

CALGARY

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
21. VENTILATION								
21.10 Ventilation system, complete for 24-unit apartment building with all ductwork and fans.	24	apt.	88.00	2,112	240.00	5,760	328.00	7,872
SUBTOTAL - VENTILATION	4.24	/m2 GFA		2,112		5,760		7,872
22. FIRE PROTECTION								
22.10 Fire protection system, complete for 24-unit apartment building.	24	apt.	31.00	744	59.00	1,416	90.00	2,160
SUBTOTAL - FIRE PROTECTION	1.16	/m2 GFA		744		1,416		2,160
23. ELECTRICAL								
23.10 Complete electrical installation including fixture supply: fixtures, receptacles and connections for TV, phone and razor; vent fan, door-bell with two presses, 100 A service board and fire alarm system (includes for elect. fixtures.)	24	apt.	705.00	16,920	1,100.00	26,400	1,805.00	43,320
SUBTOTAL - ELECTRICAL	23.33	/m2 GFA		16,920		26,400		43,320

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

CALGARY

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
24. SITE OVERHEADS								
24.10 Site Overheads								
- setup								
- supervision								
- plant								
- site office								
- small tools								
- security								
- boarding, etc.	24	apt.	1,388.00	33,312	695.35	16,688	2,083.35	50,000
SUBTOTAL - SITE OVERHEADS	26.93	/m2 GFA		33,312		16,688		50,000
25. GENERAL CONTRACTOR'S OVERHEADS & PROFIT								
25.10 General Contractor's Overhead & Profit								
- permits								
- bonds								
- insurance								
- office overhead								
- profit	24	apt.	840.00	20,160	425.00	10,200	1,265.00	30,360
SUBTOTAL - GEN.CONTRACTOR'S OH.& PROFIT	16.35	/m2 GFA		20,160		10,200		30,360
TOTAL - CALGARY	400.87	/m2 GFA		265,108		479,312		744,420

DETAILED COST ESTIMATES FOR RED DEER

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

RED DEER

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
1. EXCAVATION									
1.10	Excavate for basement, wall footings, and bases.	891	m3	0.48	428	1.25	1,114	1.73	1,541
1.20	Backfill to basement walls, footings, and bases.	188	m3	0.39	73	0.75	141	1.14	214
1.30	150 mm gravel or sand bed under slab on grade.	70	m3	3.46	242	11.67	817	15.13	1,059
1.40	.152 mm polyethylene vapour barrier on gravel or sand bed.	501	m2	0.91	456	0.30	150	1.21	606
	SUBTOTAL - EXCAVATION	1.84	/m2 GFA		1,199		2,222		3,421
2. CONCRETE									
2.10	25 MPa concrete in footings and basement walls (material only) 200 mm reinforced concrete wall, 250 x 560 mm reinforced concrete footing.	58	m3	0.00	0	107.04	6,208	107.04	6,208
2.20	Reinforcing steel in footings and basement walls (material only).	1,652	kg	0.00	0	0.79	1,305	0.79	1,305
2.30	Form, place rebar and pour concrete in footing (560 x 250 mm) -subcontract	222	m	6.24	1,385	2.02	448	8.26	1,834

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

RED DEER

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
2.35	Form, place rebar, and pour concrete in basement wall (1.2 m high) (subcontract)	96	m	17.93	1,721	6.30	605	24.23	2,326
2.40	90 mm concrete (20 MPa) in slab on grade.	456	m2	3.91	1,783	8.98	4,095	12.89	5,878
2.45	150 x 150 mm welded wire mesh reinforcement to slab on grade (material only).	456	m2	0.00	0	3.11	1,418	3.11	1,418
2.55	38 mm thick rigid insulation to concrete wall (basement).	117	m2	2.15	252	4.26	498	6.41	750
2.60	Parging to concrete walls.	29	m2	9.74	282	3.17	92	12.91	374
	SUBTOTAL - CONCRETE	10.82	/m2 GFA		5,424		14,670		20,094
3.	DAMPROOFING								
3.10	Two coats asphaltic emulsion on concrete walls.	159	m2	0.42	67	0.38	60	0.80	127
3.20	100 mm perforated plastic weeping tile in crushed gravel surround.	96	m	4.13	396	4.16	399	8.29	796
	SUBTOTAL - DAMPROOFING	0.50	/m2 GFA		463		460		923
4.	SIDING								
4.10	Prefinished aluminum siding	98	m2	6.82	668	15.80	1,548	22.62	2,217

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

RED DEER

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
4.40	Stained dark-brown cedar siding 25 x 150 mm channel to column.	700	FBM	0.73	511	1.23	861	1.96	1,372
4.50	Stucco on wire mesh incl. building paper.	678	m2	10.27	6,963	5.63	3,817	15.90	10,780
4.60	24 ga. aluminum vented metal soffit c/w edge moulding.	59	m2	4.87	287	9.45	558	14.32	845
	SUBTOTAL - SIDING	8.19	/m2 GFA		8,430		6,784		15,214
5.	ROOFING/SHEET METAL								
5.10	Built-up asphalt roofing completed with mineral granular and flashing.	527	m2	20.50	10,804	18.27	9,628	38.77	20,432
5.30	R.S.I. 6 (R34) batt insulation in joist space.	527	m2	1.73	912	8.29	4,369	10.02	5,281
5.40	.102 mm polyethylene vapour barrier.	580	m2	0.29	168	0.24	139	0.53	307
5.50	Prefinished flashing over window.	66	m	1.55	102	3.01	199	4.56	301
	SUBTOTAL - ROOFING/SHEET METAL	14.17	/m2 GFA		11,986		14,335		26,321

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

RED DEER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6. CARPENTRY (ROUGH)								
6.10 Material Only No. 2 grade fir or spruce as below floor joists (38 x 235 mm) - fir built-up beam (3-38 x 235 mm) - fir built-up beam (2-38 x 235 mm) - fir roof joist (38 x 235 mm) - spruce	38.0	MFBM	0.00	0	771.23	29,307	771.23	29,307
6.20 Material Only No. 2 grade fir or spruce as below framing (38 x140 mm) - fir plate (38 x 140 mm) - fir cross bridging (38 x 38 mm) - spruce framing (38 x 89 mm) - spruce framing (38 x 140 mm) - spruce blocking (38 x 89 mm) - spruce blocking (38 x 140 mm) - spruce wall strapping (38 x 38 mm) - spruce fascia (19 x 140 mm) - spruce	44.0	MFBM	0.00	0	578.90	25,472	578.90	25,472
6.30 Material Only - Sheathing 19 mm plywood (floor underlay) 1432 m2 13 mm tentest (u/s of joist) 1368 m2 10 mm plywood (roof sheathing) 524 m2 13 mm plywood (wall sheathing - protection board 350mm high) 19 m2 8 mm plywood (wall sheathing) 727 m2	4,070	m2	0.00	0	8.22	33,455	8.22	33,455
6.40 Labour Only - complete framing including installation of windows.	1,857	m2	23.68	43,974	0.00	0	23.68	43,974

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

RED DEER CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6.50	90 x 238 mm wide R.S.I. 2.1 (R12) batt insulation (vertical eaves).	99	m	0.46	46	0.71	70	1.17	116
	SUBTOTAL - CARPENTRY (ROUGH)	71.26	/m2 GFA		44,019		88,304		132,323
7.	CARPENTRY (FINISH)								
7.10	Stair - 6 flights @ (2x6x8 = 96 risers) 38 x 300 mm stringers 59 m 38 x 235 mm treads 103 m 6 x 275 mm fir plywood in risers 115 m	2	No.	568.00	1,136	389.00	778	957.00	1,914
7.30	Select grade fir in window and door trim and base (40 x 12 mm) - window 431 m - door 555 m - base 2328 m	3,314	m	1.35	4,474	1.19	3,944	2.54	8,418
	SUBTOTAL - CARPENTRY (FINISH)	5.56	/m2 GFA		5,610		4,722		10,332
8.	WINDOWS AND GLAZING								
8.10	Double-glazed patio door in wood frame with aluminum cladding and including hardware (size 2.4 x 1.8 m).	18	No.	0.00	0	904.00	16,272	904.00	16,272
8.20	Double-glazed wired glass sealed window in steel frame (size 2.4 x2.55 m).	4	No.	0.00	0	890.00	3,560	890.00	3,560
8.30	Double-glazed sliding units in wood frame (size 2.4 x .9 m) including aluminum sliders, screen, and hardware.	6	No.	0.00	0	253.00	1,518	253.00	1,518

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

RED DEER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
B.40 Double-glazed sliding units in wood frame (size 1.5 x .9 m) including aluminum sliders, screen, and hardware.	28	No.	0.00	0	172.00	4,816	172.00	4,816
B.50 Double-glazed sliding units in wood frame (size .9 x .9 m) including aluminum sliders, screen, and hardware.	3	No.	0.00	0	140.00	420	140.00	420
SUBTOTAL - WINDOWS AND GLAZING	14.32	/m2 GFA		0		26,586		26,586
9. SEALANTS								
9.10 Caulk (exterior) (exterior doors, windows, junction of siding and concrete).	725	m	0.39	283	0.26	189	0.65	471
9.20 Caulk (interior) - ceramic tile	227	m	1.09	247	0.58	132	1.67	379
SUBTOTAL - SEALANTS	0.46	/m2 GFA		530		320		850
10. Doors								
10.03 Exterior - Aluminum entrance and sidelight, (size 2.4 x 2.1 m overall) including .9 x 2.1 m aluminum glazed door c/w door closer, push and pull, lock and aluminum threshold.	3	No	235.00	705	1,680.00	5,040	1,915.00	5,745

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

RED DEER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
10.06 Fire rated door and sidelight with 0.9 x 2.1 m, 20 min. label wood door and pressed steel frame including hardware and 6 mm wire glass to sidelight								
- 4 No. 1.9 x 2.1 m - 4 No. 1.4 x 2.1 m	8	No.	200.00	1,600	1,170.00	9,360	1,370.00	10,960
10.09 Solid core door and frame, rotary cut mahogany								
- 24 No. .9x2.1mx44mm (20 min. label) - 26 No. .85 x 2.1m x 44mm	50	No.	22.50	1,125	203.00	10,150	225.50	11,275
10.10 Solid core door and frame, rotary cut mahogany								
- 1 No. .9x2.1mx44mm (45 min. label)	1	No.	22.50	23	250.00	250	272.50	273
10.20 Hollow core door and frame, rotary cut mahogany face								
- 24 No. .70 x 2.0 m x 35mm - 24 No. .75 x 2.0 m x 35mm	48	No.	12.00	576	42.95	2,062	54.95	2,638
10.25 Metal door labelled (1 hour) c/w fire rated pressed steel frame								
- 1 No. .9 x 2.1 m x 45 mm	1	No.	22.50	23	210.00	210	232.50	233

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

RED DEER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
10.30 Metal folding bi-fold doors, with tracks and pulls - 28 No. 1.8 x 2.0 m - 14 No. 1.5 x 2.0 m - 6 No. 1.2 x 2.0 m - 14 No. 0.9 x 2.0 m - 16 No. 0.6 x 2.0 m	78	No.	12.25	956	124.00	9,672	136.25	10,628
SUBTOTAL - DOORS	22.48	/m2 GFA		5,007		36,744		41,751
11. HARDWARE								
11.15 Lock sets to interior doors.	25	set	12.00	300	24.78	620	36.78	920
11.25 Butts to interior doors. (included with frames)	129	pair	0.00	0	0.00	0	0.00	0
11.30 Latch sets.	81	set	8.00	648	12.99	1,052	20.99	1,700
11.40 Bathroom privacy latch sets.	24	set	8.00	192	14.99	360	22.99	552
11.50 Door closers (rated).	14	No.	13.00	182	29.00	406	42.00	588
SUBTOTAL - HARDWARE	2.02	/m2 GFA		1,322		2,437		3,759
12. CERAMIC TILING								
12.10 Ceramic tile 100 x 100 x 6 mm thinset on drywall.	137	m2	22.00	3,014	17.39	2,382	39.39	5,396
SUBTOTAL - CERAMIC TILING	2.91	/m2 GFA		3,014		2,382		5,396

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

RED DEER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13. WALLBOARD								
13.10 Gypsum wallboard (13mm standard) on walls, taped and sanded.	3,906	m2	2.50	9,765	2.18	8,515	4.68	18,280
13.13 Gypsum wallboard (13mm fire rated) taped and sanded.								
- walls	705	m2						
- stair soffit	29	m2						
	734	m2	2.74	2,011	2.60	1,908	5.34	3,920
13.14 Gypsum wallboard (15.9 mm thick), taped and sanded.	487	m2	2.74	1,334	3.17	1,544	5.91	2,878
13.15 Gypsum wallboard (15.9mm fire rated) to shaft enclosure, taped and sanded.	63	m2	4.92	310	3.35	211	8.27	521
13.16 Gypsum wallboard (15.9mm fire rated with sound barrier) on ceiling, taped and sanded.	1,887	m2	3.81	7,189	3.69	6,963	7.50	14,153
13.17 2 layers gypsum wallboard (15.9mm fire rated with sound barrier) on ceiling,taped and sanded.	4	m2	5.60	22	7.41	30	13.01	52
13.30 Tentest board, Crane 3-183 Redcliffe	524	m2	4.40	2,306	3.16	1,656	7.56	3,961
13.40 Finish to ceilings - textured	1,425	m2	1.26	1,796	1.16	1,653	2.42	3,449

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

RED DEER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13.70 .102 mm polyethylene vapour barrier.	1,346	m2	0.29	390	0.24	323	0.53	713
13.83 Batt insulation RSI - 3.5 (R20) to exterior walls.	728	m2	0.87	633	4.28	3,116	5.15	3,749
13.86 Batt insulation RSI - 3.5 (R20) to interior walls.	908	m2	0.87	790	4.28	3,886	5.15	4,676
SUBTOTAL - WALLBOARD	30.35	/m2 GFA		26,547		29,805		56,352
14. FLOORING								
14.10 Sheet vinyl flooring (.065 gauge) with adhesive to subfloor.	364	m2	5.63	2,049	11.94	4,346	17.57	6,395
14.20 20 oz, 100% Nylon carpet c/w 13 mm thick chip foam underlay.	1,296	m2	3.60	4,666	14.69	19,038	18.29	23,704
14.30 'Neoprene Hypalon' waterproofing or equal to balcony.	67	m2	17.75	1,189	22.70	1,521	40.45	2,710
14.40 Gypcrete floor topping including steel trowel finish.	1,338	m2	7.80	10,436	4.00	5,352	11.80	15,788
SUBTOTAL - FLOORING	26.17	/m2 GFA		18,341		30,257		48,598
15. PAINTING								
15.12 Exterior work - Prepare, prime, two coats enamel on fascia board to balconies and entrance canopy.	26	m2	4.16	108	1.24	32	5.40	140

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

RED DEER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
15.14 Prepare, prime, two coats enamel on metal handrail and balustrade.	783	m	1.49	1,167	0.93	728	2.42	1,895
15.22 Interior work - Prepare, one coat primer sealer, one coat latex or semigloss paint on gypsum wallboard - walls 4962 m2 - ceiling 234 m2	5,196	m2	2.06	10,704	0.72	3,741	2.78	14,445
15.30 Two coats urethane varnish on doors and frames.	105	No.	20.30	2,132	6.34	666	26.64	2,797
15.40 Prepare, prime, one coat semigloss on base, door and window trim.	2,328	m	0.82	1,909	0.19	442	1.01	2,351
15.50 Prepare, prime, one coat semigloss on shelving.	94	m2	2.26	212	0.45	42	2.71	255
SUBTOTAL - PAINTING	11.78	/m2 GFA		16,231		5,652		21,883
16. FITTINGS								
16.10 Shelving - Douglas fir plywood, lipped one edge (20 mm thick x .45 m)	107	m	3.78	404	5.78	618	9.56	1,023

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

RED DEER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
16.20 Vanity and cabinets, plastic laminated top to lower cabinets and c/w drawers, shelves, etc.								
- lower vanity and cupboard	27	m						
- wall units	99	m						
- worktop unit	69	m						
	195	m	31.00	6,045	219.00	42,705	250.00	48,750
SUBTOTAL - FITTINGS	26.80	/m2 GFA		6,449		43,323		49,772
17. SPECIALTIES								
17.10 Washroom accessories - 24 No. toilet paperholders - 24 No. soap dishes - 48 No. towel bars	96	No.	5.95	571	8.80	845	14.75	1,416
17.20 Medicine cabinet	24	No.	10.00	240	58.95	1,415	68.95	1,655
17.30 25 mm dia. chrome shower curtain rod.	24	No.	5.50	132	6.49	156	11.99	288
17.40 Mail box and house numbers (size .81 x .45 m) for 24 apts.	1	set	60.00	60	405.00	405	465.00	465
17.50 18 mm dia. chrome coat rods.	24	No.	3.50	84	4.81	115	8.31	199
17.60 Drapery tracks.	102	m	3.28	335	8.55	872	11.83	1,207

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

RED DEER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
17.70 970 mm high metal balustrade to balconies c/w balusters 100 mm o.c.	98	m	11.00	1,078	43.70	4,283	54.70	5,361
17.80 Metal balustrade to stairs c/w vinyl cap.	66	m	11.00	726	38.58	2,546	49.58	3,272
17.90 50 mm dia. pipe handrail and brackets.	54	m	24.25	1,310	46.00	2,484	70.25	3,794
SUBTOTAL - SPECIALTIES	9.51	/m2 GFA		4,535		13,121		17,656
18. APPLIANCES								
18.10 Freestanding range, 760 mm (30") top four surface elements, oven auto timer.	24	No.	15.50	372	528.00	12,672	543.50	13,044
18.20 Electric refrigerator, manual defrost .37 m3 (13 cu. ft.) capacity	24	No.	15.50	372	490.00	11,760	505.50	12,132
18.30 Range hood	24	No.	15.50	372	95.00	2,280	110.50	2,652
18.40 Coin operated dryer.	2	No.	15.50	31	615.00	1,230	630.50	1,261
18.50 Coin operated washer.	2	No.	15.50	31	792.00	1,584	807.50	1,615
SUBTOTAL - APPLIANCES	16.53	/m2 GFA		1,178		29,526		30,704

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

RED DEER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
19. PLUMBING								
19.10 Complete plumbing including : -24 No. water closets -32 No. lavatory basins -24 No. baths (5') - 1 No. mop service basin - 1 No. laundry tub (The above Crane or equal) -24 No. kitchen sinks, compartment, stainless steel. - 1 No. water heater and storage tank, cap. 300 MBH - 1 No. domestic hot water recirculating pump and accessories. - rough-in, waste and vent - roof drains	24	apt.	680.00	16,320	1,980.00	47,520	2,660.00	63,840
SUBTOTAL - PLUMBING	34.38	/m2 GFA		16,320		47,520		63,840
20. HEATING								
20.10 Hot water circulation system (268 m total length) c/w radiators, 24 control valves, one centrifugal circulation pump, complete with all piping, 50 gallon expansion tank, hot water heating boiler and gas supply system.	24	apt.	460.00	11,040	1,050.00	25,200	1,510.00	36,240
SUBTOTAL - HEATING	19.52	/m2 GFA		11,040		25,200		36,240

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

RED DEER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
21. VENTILATION								
21.10 Ventilation system, complete for 24-unit apartment building with all ductwork and fans.	24	apt.	78.00	1,872	234.00	5,616	312.00	7,488
SUBTOTAL - VENTILATION	4.03	/m2 GFA		1,872		5,616		7,488
22. FIRE PROTECTION								
22.10 Fire protection system, complete for 24-unit apartment building.	24	apt.	30.00	720	58.00	1,392	88.00	2,112
SUBTOTAL - FIRE PROTECTION	1.14	/m2 GFA		720		1,392		2,112
23. ELECTRICAL								
23.10 Complete electrical installation including fixture supply: fixtures, receptacles and connections for TV, phone and razor; vent fan, door-bell with two presses, 100 A service board and fire alarm system (includes for elect. fixtures.)	24	apt.	900.00	21,600	1,080.00	25,920	1,980.00	47,520
SUBTOTAL - ELECTRICAL	25.59	/m2 GFA		21,600		25,920		47,520

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

RED DEER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
24. SITE OVERHEADS								
24.10 Site Overheads - setup - supervision - plant - site office - small tools - security - boarding, etc.	24	apt.	1,388.00	33,312	695.35	16,688	2,083.35	50,000
SUBTOTAL - SITE OVERHEADS	26.93	/m2 GFA		33,312		16,688		50,000
25. GENERAL CONTRACTOR'S OVERHEADS & PROFIT								
25.10 General Contractor's Overhead & Profit - permits - bonds - insurance - office overhead - profit	24	apt.	800.00	19,200	380.00	9,120	1,180.00	28,320
SUBTOTAL - GEN.CONTRACTOR'S OH.& PROFIT	15.25	/m2 GFA		19,200		9,120		28,320
TOTAL - RED DEER	402.51	/m2 GFA		264,349		483,106		747,455

DETAILED COST ESTIMATES FOR FORT McMURRAY

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

FORT McMURRAY

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
1. EXCAVATION									
1.10	Excavate for basement, wall footings, and bases.	891	m3	0.62	552	1.07	953	1.69	1,506
1.20	Backfill to basement walls, footings, and bases.	188	m3	0.57	107	0.98	184	1.55	291
1.30	150 mm gravel or sand bed under slab on grade.	70	m3	3.20	224	19.30	1,351	22.50	1,575
1.40	.152 mm polyethylene vapour barrier on gravel or sand bed.	501	m2	0.91	456	0.30	150	1.21	606
	SUBTOTAL - EXCAVATION	2.14	/m2 GFA		1,339		2,639		3,978
2. CONCRETE									
2.10	25 MPa concrete in footings and basement walls (material only) 200 mm reinforced concrete wall, 250 x 560 mm reinforced concrete footing.	58	m3	0.00	0	148.05	8,587	148.05	8,587
2.20	Reinforcing steel in footings and basement walls (material only).	1,652	kg	0.00	0	0.79	1,305	0.79	1,305
2.30	Form, place rebar and pour concrete in footing (560 x 250 mm) -subcontract	222	m	6.53	1,450	2.53	562	9.06	2,011

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

FORT McMURRAY

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
2.35	Form, place rebar, and pour concrete in basement wall (1.2 m high) (subcontract)	96	m	18.77	1,802	7.88	756	26.65	2,558
2.40	90 mm concrete (20 MPa) in slab on grade.	456	m2	3.88	1,769	11.22	5,116	15.10	6,886
2.45	150 x 150 mm welded wire mesh reinforcement to slab on grade (material only).	456	m2	0.00	0	3.20	1,459	3.20	1,459
2.55	38 mm thick rigid insulation to concrete wall (basement).	117	m2	2.42	283	4.36	510	6.78	793
2.60	Parging to concrete walls.	29	m2	9.24	268	4.45	129	13.69	397
	SUBTOTAL - CONCRETE	12.92	/m2 GFA		5,572		18,425		23,997
3.	DAMPROOFING								
3.10	Two coats asphaltic emulsion on concrete walls.	159	m2	0.39	62	0.39	62	0.78	124
3.20	100 mm perforated plastic weeping tile in crushed gravel surround.	96	m	7.13	684	4.40	422	11.53	1,107
	SUBTOTAL - DAMPROOFING	0.66	/m2 GFA		746		484		1,230
4.	SIDING								
4.10	Prefinished aluminum siding	98	m2	6.85	671	16.45	1,612	23.30	2,283

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

FORT McMURRAY

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
4.40	Stained dark-brown cedar siding 25 x 150 mm channel to column.	700	FBM	0.86	602	1.24	868	2.10	1,470
4.50	Stucco on wire mesh incl. building paper.	678	m2	14.04	9,519	6.90	4,678	20.94	14,197
4.60	24 ga. aluminum vented metal soffit c/w edge moulding.	59	m2	6.80	401	10.90	643	17.70	1,044
	SUBTOTAL - SIDING	10.23	/m2 GFA		11,194		7,801		18,995
5.	ROOFING/SHEET METAL								
5.10	Built-up asphalt roofing completed with mineral granular and flashing.	527	m2	28.85	15,204	23.45	12,358	52.30	27,562
5.30	R.S.I. 6 (R34) batt insulation in joist space.	527	m2	1.82	959	8.28	4,364	10.10	5,323
5.40	.102 mm polyethylene vapour barrier.	580	m2	0.34	197	0.24	139	0.58	336
5.50	Prefinished flashing over window.	66	m	2.07	137	3.29	217	5.36	354
	SUBTOTAL - ROOFING/SHEET METAL	18.08	/m2 GFA		16,497		17,078		33,575

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

FORT McMURRAY

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6. CARPENTRY (ROUGH)								
6.10 Material Only No. 2 grade fir or spruce as below floor joists (38 x 235 mm) - fir built-up beam (3-38 x 235 mm) - fir built-up beam (2-38 x 235 mm) - fir roof joist (38 x 235 mm) - spruce	38.0	MFBM	0.00	0	850.00	32,300	850.00	32,300
6.20 Material Only No. 2 grade fir or spruce as below framing (38 x140 mm) - fir plate (38 x 140 mm) - fir cross bridging (38 x 38 mm) - spruce framing (38 x 89 mm) - spruce framing (38 x 140 mm) - spruce blocking (38 x 89 mm) - spruce blocking (38 x 140 mm) - spruce wall strapping (38 x 38 mm) - spruce fascia (19 x 140 mm) - spruce	44.0	MFBM	0.00	0	636.79	28,019	636.79	28,019
6.30 Material Only - Sheathing 19 mm plywood (floor underlay) 1432 m2 13 mm tentest (u/s of joist) 1368 m2 10 mm plywood (roof sheathing) 524 m2 13 mm plywood (wall sheathing - protection board 350mm high) 19 m2 8 mm plywood (wall sheathing) 727 m2	4,070	m2	0.00	0	10.40	42,328	10.40	42,328
6.40 Labour Only - complete framing including installation of windows.	1,857	m2	31.00	57,567	0.00	0	31.00	57,567

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

FORT McMURRAY CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6.50	90 x 238 mm wide R.S.I. 2.1 (R12) batt insulation (vertical eaves).	99	m	0.47	47	0.75	74	1.22	121
	SUBTOTAL - CARPENTRY (ROUGH)	86.34	/m2 GFA		57,614		102,721		160,335
7.	CARPENTRY (FINISH)								
7.10	Stair - 6 flights @ (2x6x8 = 96 risers)								
	38 x 300 mm stringers 59 m								
	38 x 235 mm treads 103 m								
	6 x 275 mm fir plywood in risers 115 m	2	No.	653.00	1,306	451.00	902	1,104.00	2,208
7.30	Select grade fir in window and door trim and base (40 x 12 mm)								
	- window 431 m								
	- door 555 m								
	- base 2328 m	3,314	m	1.50	4,971	1.35	4,474	2.85	9,445
	SUBTOTAL - CARPENTRY (FINISH)	6.28	/m2 GFA		6,277		5,376		11,653
8.	WINDOWS AND GLAZING								
8.10	Double-glazed patio door in wood frame with aluminum cladding and including hardware (size 2.4 x 1.8 m).	18	No.	0.00	0	1,030.00	18,540	1,030.00	18,540
8.20	Double-glazed wired glass sealed window in steel frame (size 2.4 x2.55 m).	4	No.	0.00	0	1,010.00	4,040	1,010.00	4,040
8.30	Double-glazed sliding units in wood frame (size 2.4 x .9 m) including aluminum sliders, screen, and hardware.	6	No.	0.00	0	285.00	1,710	285.00	1,710

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

FORT McMURRAY

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
8.40	Double-glazed sliding units in wood frame (size 1.5 x .9 m) including aluminum sliders, screen, and hardware.	28	No.	0.00	0	192.00	5,376	192.00	5,376
8.50	Double-glazed sliding units in wood frame (size .9 x .9 m) including aluminum sliders, screen, and hardware.	3	No.	0.00	0	156.00	468	156.00	468
	SUBTOTAL - WINDOWS AND GLAZING	16.23	/m2 GFA		0		30,134		30,134
9.	SEALANTS								
9.10	Caulk (exterior) (exterior doors, windows, junction of siding and concrete).	725	m	0.42	305	0.28	203	0.70	508
9.20	Caulk (interior) - ceramic tile	227	m	1.16	263	0.62	141	1.78	404
	SUBTOTAL - SEALANTS	0.49	/m2 GFA		568		344		912
10.	Doors								
10.03	Exterior - Aluminum entrance and sidelight, (size 2.4 x 2.1 m overall) including .9 x 2.1 m aluminum glazed door c/w door closer, push and pull, lock and aluminum threshold.	3	No	258.00	774	1,680.00	5,040	1,938.00	5,814

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

FORT McMURRAY

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
10.06 Fire rated door and sidelight with 0.9 x 2.1 m, 20 min. label wood door and pressed steel frame including hardware and 6 mm wire glass to sidelight - 4 No. 1.9 x 2.1 m - 4 No. 1.4 x 2.1 m	8	No.	195.00	1,560	1,190.00	9,520	1,385.00	11,080
10.09 Solid core door and frame, rotary cut mahogany - 24 No. .9x2.1mx44mm (20 min. label) - 26 No. .85 x 2.1m x 44mm	50	No.	27.00	1,350	218.00	10,900	245.00	12,250
10.10 Solid core door and frame, rotary cut mahogany - 1 No. .9x2.1mx44mm (45 min. label)	1	No.	27.00	27	275.00	275	302.00	302
10.20 Hollow core door and frame, rotary cut mahogany face - 24 No. .70 x 2.0 m x 35mm - 24 No. .75 x 2.0 m x 35mm	48	No.	14.25	684	48.99	2,352	63.24	3,036
10.25 Metal door labelled (1 hour) c/w fire rated pressed steel frame - 1 No. .9 x 2.1 m x 45 mm	1	No.	27.00	27	235.00	235	262.00	262

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

FORT McMURRAY CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
10.30 Metal folding bi-fold doors, with tracks and pulls - 28 No. 1.8 x 2.0 m - 14 No. 1.5 x 2.0 m - 6 No. 1.2 x 2.0 m - 14 No. 0.9 x 2.0 m - 16 No. 0.6 x 2.0 m	78	No.	13.50	1,053	140.00	10,920	153.50	11,973
SUBTOTAL - DOORS	24.08	/m2 GFA		5,475		39,242		44,717
11. HARDWARE								
11.15 Lock sets to interior doors.	25	set	13.50	338	26.18	655	39.68	992
11.25 Butts to interior doors. (included with frames)	129	pair	0.00	0	0.00	0	0.00	0
11.30 Latch sets.	81	set	9.00	729	14.20	1,150	23.20	1,879
11.40 Bathroom privacy latch sets.	24	set	9.00	216	16.20	389	25.20	605
11.50 Door closers (rated).	14	No.	15.00	210	30.76	431	45.76	641
SUBTOTAL - HARDWARE	2.22	/m2 GFA		1,493		2,624		4,117
12. CERAMIC TILING								
12.10 Ceramic tile 100 x 100 x 6 mm thinset on drywall.	137	m2	28.30	3,877	19.40	2,658	47.70	6,535
SUBTOTAL - CERAMIC TILING	3.52	/m2 GFA		3,877		2,658		6,535

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

FORT McMURRAY CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13. WALLBOARD								
13.10 Gypsum wallboard (13mm standard) on walls, taped and sanded.	3,906	m2	3.60	14,062	2.62	10,234	6.22	24,295
13.13 Gypsum wallboard (13mm fire rated) taped and sanded.								
- walls 705 m2								
- stair soffit 29 m2	734	m2	3.96	2,907	3.12	2,290	7.08	5,197
13.14 Gypsum wallboard (15.9 mm thick), taped and sanded.	487	m2	3.96	1,929	3.78	1,841	7.74	3,769
13.15 Gypsum wallboard (15.9mm fire rated) to shaft enclosure, taped and sanded.	63	m2	5.23	329	4.02	253	9.25	583
13.16 Gypsum wallboard (15.9mm fire rated with sound barrier) on ceiling, taped and sanded.	1,887	m2	4.16	7,850	4.43	8,359	8.59	16,209
13.17 2 layers gypsum wallboard (15.9mm fire rated with sound barrier) on ceiling,taped and sanded.	4	m2	7.32	29	8.89	36	16.21	65
13.30 Tentest board, Crane 3-183 Redcliffe	524	m2	5.20	2,725	3.79	1,986	8.99	4,711
13.40 Finish to ceilings - textured	1,425	m2	1.94	2,765	1.36	1,938	3.30	4,703

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

FORT McMURRAY

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13.70 .102 mm polyethylene vapour barrier.	1,346	m2	0.34	458	0.24	323	0.58	781
13.83 Batt insulation RSI - 3.5 (R20) to exterior walls.	728	m2	0.87	633	4.33	3,152	5.20	3,786
13.86 Batt insulation RSI - 3.5 (R20) to interior walls.	908	m2	0.87	790	4.33	3,932	5.20	4,722
SUBTOTAL - WALLBOARD	37.06	/m2 GFA		34,476		34,344		68,820
14. FLOORING								
14.10 Sheet vinyl flooring (.065 gauge) with adhesive to subfloor.	364	m2	6.30	2,293	11.94	4,346	18.24	6,639
14.20 20 oz, 100% Nylon carpet c/w 13 mm thick chip foam underlay.	1,296	m2	3.75	4,860	15.61	20,231	19.36	25,091
14.30 'Neoprene Hypalon' waterproofing or equal to balcony.	67	m2	20.00	1,340	26.50	1,776	46.50	3,116
14.40 Gypcrete floor topping including steel trowel finish.	1,338	m2	8.80	11,774	4.71	6,302	13.51	18,076
SUBTOTAL - FLOORING	28.50	/m2 GFA		20,268		32,654		52,922
15. PAINTING								
15.12 Exterior work - Prepare, prime, two coats enamel on fascia board to balconies and entrance canopy.	26	m2	5.40	140	1.30	34	6.70	174

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

FORT McMURRAY

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
15.14 Prepare, prime, two coats enamel on metal handrail and balustrade.	783	m	1.48	1,159	0.96	752	2.44	1,911
15.22 Interior work - Prepare, one coat primer sealer, one coat latex or semigloss paint on gypsum wallboard - walls 4962 m2 - ceiling 234 m2	5,196	m2	2.32	12,055	0.70	3,637	3.02	15,692
15.30 Two coats urethane varnish on doors and frames.	105	No.	27.40	2,877	6.26	657	33.66	3,534
15.40 Prepare, prime, one coat semigloss on base, door and window trim.	2,328	m	0.77	1,793	0.18	419	0.95	2,212
15.50 Prepare, prime, one coat semigloss on shelving.	94	m2	2.26	212	0.47	44	2.73	257
SUBTOTAL - PAINTING	12.81	/m2 GFA		18,236		5,543		23,779
16. FITTINGS								
16.10 Shelving - Douglas fir plywood, lipped one edge (20 mm thick x .45 m)	107	m	3.65	391	5.99	641	9.64	1,031

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

FORT McMURRAY

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
16.20 Vanity and cabinets, plastic laminated top to lower cabinets and c/w drawers, shelves, etc.								
- lower vanity and cupboard	27	m						
- wall units	99	m						
- worktop unit	69	m						
	195	m	36.50	7,118	248.00	48,360	284.50	55,478
SUBTOTAL - FITTINGS	30.43	/m2 GFA		7,508		49,001		56,509
17. SPECIALTIES								
17.10 Washroom accessories - 24 No. toilet paperholders - 24 No. soap dishes - 48 No. towel bars	96	No.	6.20	595	9.10	874	15.30	1,469
17.20 Medicine cabinet	24	No.	12.35	296	63.45	1,523	75.80	1,819
17.30 25 mm dia. chrome shower curtain rod.	24	No.	6.75	162	7.30	175	14.05	337
17.40 Mail box and house numbers (size .81 x .45 m) for 24 apts.	1	set	65.00	65	405.00	405	470.00	470
17.50 18 mm dia. chrome coat rods.	24	No.	4.50	108	5.82	140	10.32	248
17.60 Drapery tracks.	102	m	4.20	428	10.50	1,071	14.70	1,499

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

FORT McMURRAY

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
17.70 970 mm high metal balustrade to balconies c/w balusters 100 mm o.c.	98	m	12.75	1,250	46.00	4,508	58.75	5,758
17.80 Metal balustrade to stairs c/w vinyl cap.	66	m	12.75	842	42.50	2,805	55.25	3,647
17.90 50 mm dia. pipe handrail and brackets.	54	m	27.50	1,485	47.85	2,584	75.35	4,069
SUBTOTAL - SPECIALTIES	10.40	/m2 GFA		5,231		14,084		19,315
18. APPLIANCES								
18.10 Freestanding range, 760 mm (30") top four surface elements, oven auto timer.	24	No.	20.00	480	546.00	13,104	566.00	13,584
18.20 Electric refrigerator, manual defrost .37 m3 (13 cu. ft.) capacity	24	No.	20.00	480	516.00	12,384	536.00	12,864
18.30 Range hood	24	No.	20.00	480	111.00	2,664	131.00	3,144
18.40 Coin operated dryer.	2	No.	20.00	40	625.00	1,250	645.00	1,290
18.50 Coin operated washer.	2	No.	20.00	40	815.00	1,630	835.00	1,670
SUBTOTAL - APPLIANCES	17.53	/m2 GFA		1,520		31,032		32,552

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

FORT McMURRAY

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
19. PLUMBING								
19.10 Complete plumbing including : -24 No. water closets -32 No. lavatory basins -24 No. baths (5') - 1 No. mop service basin - 1 No. laundry tub (The above Crane or equal) -24 No. kitchen sinks, compartment, stainless steel. - 1 No. water heater and storage tank, cap. 300 MBH - 1 No. domestic hot water recirculating pump and accessories. - rough-in, waste and vent - roof drains	24	apt.	830.00	19,920	2,050.00	49,200	2,880.00	69,120
SUBTOTAL - PLUMBING	37.22	/m2 GFA		19,920		49,200		69,120
20. HEATING								
20.10 Hot water circulation system (268 m total length) c/w radiators, 24 control valves, one centrifugal circulation pump, complete with all piping, 50 gallon expansion tank, hot water heating boiler and gas supply system.	24	apt.	525.00	12,600	1,270.00	30,480	1,795.00	43,080
SUBTOTAL - HEATING	23.20	/m2 GFA		12,600		30,480		43,080

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

FORT McMURRAY

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
21. VENTILATION								
21.10 Ventilation system, complete for 24-unit apartment building with all ductwork and fans.	24	apt.	98.00	2,352	295.00	7,080	393.00	9,432
SUBTOTAL - VENTILATION	5.08	/m2 GFA		2,352		7,080		9,432
22. FIRE PROTECTION								
22.10 Fire protection system, complete for 24-unit apartment building.	24	apt.	38.00	912	74.00	1,776	112.00	2,688
SUBTOTAL - FIRE PROTECTION	1.45	/m2 GFA		912		1,776		2,688
23. ELECTRICAL								
23.10 Complete electrical installation including fixture supply; fixtures, receptacles and connections for TV, phone and razor; vent fan, door-bell with two presses, 100 A service board and fire alarm system (includes for elect. fixtures.)	24	apt.	960.00	23,040	1,250.00	30,000	2,210.00	53,040
SUBTOTAL - ELECTRICAL	28.56	/m2 GFA		23,040		30,000		53,040

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

FORT McMURRAY CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
24. SITE OVERHEADS								
24.10 Site Overheads								
- setup								
- supervision								
- plant								
- site office								
- small tools								
- security								
- boarding, etc.	24	apt.	1,388.00	33,312	695.35	16,688	2,083.35	50,000
SUBTOTAL - SITE OVERHEADS	26.93	/m2 GFA		33,312		16,688		50,000
25. GENERAL CONTRACTOR'S OVERHEADS & PROFIT								
25.10 General Contractor's Overhead & Profit								
- permits								
- bonds								
- insurance								
- office overhead								
- profit	24	apt.	750.00	18,000	350.00	8,400	1,100.00	26,400
SUBTOTAL - GEN.CONTRACTOR'S OH.& PROFIT	14.22	/m2 GFA		18,000		8,400		26,400
TOTAL - FORT McMURRAY	456.56	/m2 GFA		308,027		539,808		847,835

DETAILED COST ESTIMATES FOR GRANDE PRAIRIE

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

GRANDE PRAIRIE

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
1. EXCAVATION									
1.10	Excavate for basement, wall footings, and bases.	891	m3	0.62	552	1.04	927	1.66	1,479
1.20	Backfill to basement walls, footings, and bases.	188	m3	0.58	109	0.96	180	1.54	290
1.30	150 mm gravel or sand bed under slab on grade.	70	m3	3.30	231	11.92	834	15.22	1,065
1.40	.152 mm polyethylene vapour barrier on gravel or sand bed.	501	m2	0.98	491	0.31	155	1.29	646
	SUBTOTAL - EXCAVATION	1.87	/m2 GFA		1,383		2,097		3,480
2. CONCRETE									
2.10	25 MPa concrete in footings and basement walls (material only) 200 mm reinforced concrete wall, 250 x 560 mm reinforced concrete footing.	58	m3	0.00	0	138.90	8,056	138.90	8,056
2.20	Reinforcing steel in footings and basement walls (material only).	1,652	kg	0.00	0	0.78	1,289	0.78	1,289
2.30	Form, place rebar and pour concrete in footing (560 x 250 mm) -subcontract	222	m	6.15	1,365	2.95	655	9.10	2,020

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

GRANDE PRAIRIE CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
2.35	Form, place rebar, and pour concrete in basement wall (1.2 m high) (subcontract)	96	m	17.00	1,632	9.30	893	26.30	2,525
2.40	90 mm concrete (20 MPa) in slab on grade.	456	m2	3.80	1,733	11.24	5,125	15.04	6,858
2.45	150 x [illegible]0 mm welded wire mesh reinforcement to slab on grade (material only).	456	m2	0.00	0	3.34	1,523	3.34	1,523
2.55	38 mm thick rigid insulation to concrete wall (basement).	117	m2	2.30	269	4.88	571	7.18	840
2.60	Parging to concrete walls.	29	m2	9.48	275	4.49	130	13.97	405
	SUBTOTAL - CONCRETE	12.66	/m2 GFA		5,274		18,242		23,516
3.	DAMPROOFING								
3.10	Two coats asphaltic emulsion on concrete walls.	159	m2	0.38	60	0.38	60	0.76	121
3.20	100 mm perforated plastic weeping tile in crushed gravel surround.	96	m	6.30	605	4.48	430	10.78	1,035
	SUBTOTAL - DAMPROOFING	0.62	/m2 GFA		665		491		1,156
4.	SIDING								
4.10	Prefinished aluminum siding	98	m2	6.57	644	15.01	1,471	21.58	2,115

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

GRANDE PRAIRIE

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
4.40	Stained dark-brown cedar siding 25 x 150 mm channel to column.	700	FBM	0.77	539	1.14	798	1.91	1,337
4.50	Stucco on wire mesh incl. building paper.	678	m2	14.18	9,614	6.99	4,739	21.17	14,353
4.60	24 ga. aluminum vented metal soffit c/w edge moulding.	59	m2	6.24	368	11.66	688	17.90	1,056
	SUBTOTAL - SIDING	10.16	/m2 GFA		11,165		7,696		18,861
5.	ROOFING/SHEET METAL								
5.10	Built-up asphalt roofing completed with mineral granular and flashing.	527	m2	22.82	12,026	19.70	10,382	42.52	22,408
5.30	R.S.I. 6 (R34) batt insulation in joist space.	527	m2	1.80	949	7.63	4,021	9.43	4,970
5.40	.102 mm polyethylene vapour barrier.	580	m2	0.35	203	0.23	133	0.58	336
5.50	Prefinished flashing over window.	66	m	1.95	129	3.45	228	5.40	356
	SUBTOTAL - ROOFING/SHEET METAL	15.12	/m2 GFA		13,306		14,764		28,070

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

GRANDE PRAIRIE CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6. CARPENTRY (ROUGH)								
6.10 Material Only No. 2 grade fir or spruce as below floor joists (38 x 235 mm) - fir built-up beam (3-38 x 235 mm) - fir built-up beam (2-38 x 235 mm) - fir roof joist (38 x 235 mm) - spruce	38.0	MFBM	0.00	0	798.00	30,324	798.00	30,324
6.20 Material Only No. 2 grade fir or spruce as below framing (38 x140 mm) - fir plate (38 x 140 mm) - fir cross bridging (38 x 38 mm) - spruce framing (38 x 89 mm) - spruce framing (38 x 140 mm) - spruce blocking (38 x 89 mm) - spruce blocking (38 x 140 mm) - spruce wall strapping (38 x 38 mm) - spruce fascia (19 x 140 mm) - spruce	44.0	MFBM	0.00	0	599.00	26,356	599.00	26,356
6.30 Material Only - Sheathing 19 mm plywood (floor underlay) 1432 m2 13 mm tentest (u/s of joist) 1368 m2 10 mm plywood (roof sheathing) 524 m2 13 mm plywood (wall sheathing - protection board 350mm high) 19 m2 8 mm plywood (wall sheathing) 727 m2	4,070	m2	0.00	0	9.12	37,118	9.12	37,118
6.40 Labour Only - complete framing including installation of windows.	1,857	m2	30.26	56,193	0.00	0	30.26	56,193

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

GRANDE PRAIRIE CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6.50	90 x 238 mm wide R.S.I. 2.1 (R12) batt insulation (vertical eaves).	99	m	0.47	47	0.71	70	1.18	117
	SUBTOTAL - CARPENTRY (ROUGH)	80.83	/m2 GFA		56,239		93,869		150,108
7.	CARPENTRY (FINISH)								
7.10	Stair - 6 flights @ (2x6x8 = 96 risers) 38 x 300 mm stringers 59 m 38 x 235 mm treads 103 m 6 x 275 mm fir plywood in risers 115 m	2	No.	510.00	1,020	450.00	900	960.00	1,920
7.30	Select grade fir in window and door trim and base (4) x 12 mm) - window 431 m - door 555 m - base 2328 m	3,314	m	1.50	4,971	1.19	3,944	2.69	8,915
	SUBTOTAL - CARPENTRY (FINISH)	5.83	/m2 GFA		5,991		4,844		10,835
8.	WINDOWS AND GLAZING								
8.10	Double-glazed patio door in wood frame with aluminum cladding and including hardware (size 2.4 x 1.8 m).	18	No.	0.00	0	940.00	16,920	940.00	16,920
8.20	Double-glazed wired glass sealed window in steel frame (size 2.4 x2.55 m).	4	No.	0.00	0	920.00	3,680	920.00	3,680
8.30	Double-glazed sliding units in wood frame (size 2.4 x .9 m) including aluminum sliders, screen, and hardware.	6	No.	0.00	0	265.00	1,590	265.00	1,590

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

GRANDE PRAIRIE CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
8.40	Double-glazed sliding units in wood frame (size 1.5 x .9 m) including aluminum sliders, screen, and hardware.	28	No.	0.00	0	176.00	4,928	176.00	4,928
8.50	Double-glazed sliding units in wood frame (size .9 x .9 m) including aluminum sliders, screen, and hardware.	3	No.	0.00	0	144.00	432	144.00	432
	SUBTOTAL - WINDOWS AND GLAZING	14.84	/m2 GFA		0		27,550		27,550
9.	SEALANTS								
9.10	Caulk (exterior) (exterior doors, windows, junction of siding and concrete).	725	m	0.42	305	0.29	210	0.71	515
9.20	Caulk (interior) - ceramic tile	227	m	1.16	263	0.61	138	1.77	402
	SUBTOTAL - SEALANTS	0.49	/m2 GFA		568		349		917
10.	Doors								
10.03	Exterior - Aluminum entrance and sidelight, (size 2.4 x 2.1 m overall) including .9 x 2.1 m aluminum glazed door c/w door closer, push and pull, lock and aluminum threshold.	3	No	260.00	780	1,780.00	5,340	2,040.00	6,120

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

GRANDE PRAIRIE

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
10.06 Fire rated door and sidelight with 0.9 x 2.1 m, 20 min. label wood door and pressed steel frame including hardware and 6 mm wire glass to sidelight - 4 No. 1.9 x 2.1 m - 4 No. 1.4 x 2.1 m	8	No.	201.00	1,608	1,252.00	10,016	1,453.00	11,624
10.09 Solid core door and frame, rotary cut mahogany - 24 No. .9x2.1mx44mm (20 min. label) - 26 No. .85 x 2.1m x 44mm	50	No.	27.00	1,350	214.00	10,700	241.00	12,050
10.10 Solid core door and frame, rotary cut mahogany - 1 No. .9x2.1mx44mm (45 min. label)	1	No.	27.00	27	265.00	265	292.00	292
10.20 Hollow core door and frame, rotary cut mahogany face - 24 No. .70 x 2.0 m x 35mm - 24 No. .75 x 2.0 m x 35mm	48	No.	15.00	720	46.95	2,254	61.95	2,974
10.25 Metal door labelled (1 hour) c/w fire rated pressed steel frame - 1 No. .9 x 2.1 m x 45 mm	1	No.	27.00	27	233.00	233	260.00	260

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

GRANDE PRAIRIE

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
10.30 Metal folding bi-fold doors, with tracks and pulls - 28 No. 1.8 x 2.0 m - 14 No. 1.5 x 2.0 m - 6 No. 1.2 x 2.0 m - 14 No. 0.9 x 2.0 m - 16 No. 0.6 x 2.0 m	78	No.	14.20	1,108	144.00	11,232	158.20	12,340
SUBTOTAL - DOORS	24.59	/m2 GFA		5,620		40,040		45,660
11. HARDWARE								
11.15 Lock sets to interior doors.	25	set	13.50	338	25.95	649	39.45	986
11.25 Butts to interior doors. (included with frames)	129	pair	0.00	0	0.00	0	0.00	0
11.30 Latch sets.	81	set	8.75	709	12.99	1,052	21.74	1,761
11.40 Bathroom privacy latch sets.	24	set	8.75	210	14.99	360	23.74	570
11.50 Door closers (rated).	14	No.	15.60	218	30.40	426	46.00	644
SUBTOTAL - HARDWARE	2.13	/m2 GFA		1,475		2,486		3,961
12. CERAMIC TILING								
12.10 Ceramic tile 100 x 100 x 6 mm thinset on drywall.	137	m2	27.82	3,811	19.43	2,662	47.25	6,473
SUBTOTAL - CERAMIC TILING	3.49	/m2 GFA		3,811		2,662		6,473

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

GRANDE PRAIRIE

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13. WALLBOARD								
13.10 Gypsum wallboard (13mm standard) on walls, taped and sanded.	3,906	m2	2.88	11,249	2.41	9,413	5.29	20,663
13.13 Gypsum wallboard (13mm fire rated) taped and sanded.								
- walls 705 m2								
- stair soffit 29 m2	734	m2	3.12	2,290	2.93	2,151	6.05	4,441
13.14 Gypsum wallboard (15.9 mm thick), taped and sanded.	487	m2	3.12	1,519	3.60	1,753	6.72	3,273
13.15 Gypsum wallboard (15.9mm fire rated) to shaft enclosure, taped and sanded.	63	m2	5.45	343	3.80	239	9.25	583
13.16 Gypsum wallboard (15.9mm fire rated with sound barrier) on ceiling, taped and sanded.	1,887	m2	4.24	8,001	4.12	7,774	8.36	15,775
13.17 2 layers gypsum wallboard (15.9mm fire rated with sound barrier) on ceiling,taped and sanded.	4	m2	6.49	26	8.35	33	14.84	59
13.30 Tentest board, Crane 3-183 Redcliffe	524	m2	4.56	2,389	3.25	1,703	7.81	4,092
13.40 Finish to ceilings - textured	1,425	m2	1.40	1,995	1.28	1,824	2.68	3,819

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

GRANDE PRAIRIE

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13.70 .102 mm polyethylene vapour barrier.	1,346	m2	0.34	458	0.25	337	0.59	794
13.83 Batt insulation RSI - 3.5 (R20) to exterior walls.	728	m2	0.89	648	4.20	3,058	5.09	3,706
13.86 Batt insulation RSI - 3.5 (R20) to interior walls.	908	m2	0.89	808	4.20	3,814	5.09	4,622
SUBTOTAL - WALLBOARD	33.29	/m2 GFA		29,727		32,099		61,826
14. FLOORING								
14.10 Sheet vinyl flooring (.065 gauge) with adhesive to subfloor.	364	m2	6.47	2,355	12.06	4,390	18.53	6,745
14.20 20 oz, 100% Nylon carpet c/w 13 mm thick chip foam underlay.	1,296	m2	3.69	4,782	16.55	21,449	20.24	26,231
14.30 'Neoprene Hypalon' waterproofing or equal to balcony.	67	m2	17.02	1,140	22.29	1,493	39.31	2,634
14.40 Gypcrete floor topping including steel trowel finish.	1,338	m2	7.75	10,370	3.95	5,285	11.70	15,655
SUBTOTAL - FLOORING	27.61	/m2 GFA		18,647		32,617		51,264
15. PAINTING								
15.12 Exterior work - Prepare, prime, two coats enamel on fascia board to balconies and entrance canopy.	26	m2	5.29	138	1.27	33	6.56	171

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

GRANDE PRAIRIE

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
15.14 Prepare, prime, two coats enamel on metal handrail and balustrade.	783	m	1.39	1,088	0.97	760	2.36	1,848
15.22 Interior work - Prepare, one coat primer sealer, one coat latex or semigloss paint on gypsum wallboard - walls 4962 m2 - ceiling 234 m2	5,196	m2	2.25	11,691	0.70	3,637	2.95	15,328
15.30 Two coats urethane varnish on doors and frames.	105	No.	27.00	2,835	6.14	645	33.14	3,480
15.40 Prepare, prime, one coat semigloss on base, door and window trim.	2,328	m	0.69	1,606	0.22	512	0.91	2,118
15.50 Prepare, prime, one coat semigloss on shelving.	94	m2	2.08	196	0.38	36	2.46	231
SUBTOTAL - PAINTING	12.48	/m2 GFA		17,554		5,622		23,176
16. FITTINGS								
16.10 Shelving - Douglas fir plywood, lipped one edge (20 mm thick x .45 m)	107	m	3.80	407	5.73	613	9.53	1,020

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

GRANDE PRAIRIE CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
16.20 Vanity and cabinets, plastic laminated top to lower cabinets and c/w drawers, shelves, etc.								
- lower vanity and cupboard	27	m						
- wall units	99	m						
- worktop unit	69	m	195	m 35.00	6,825	225.00	43,875	260.00 50,700
SUBTOTAL - FITTINGS	27.85	/m2 GFA		7,232		44,488		51,720
17. SPECIALTIES								
17.10 Washroom accessories - 24 No. toilet paperholders - 24 No. soap dishes - 48 No. towel bars	96	No.	6.15	590	9.40	902	15.55	1,493
17.20 Medicine cabinet	24	No.	12.00	288	62.80	1,507	74.80	1,795
17.30 25 mm dia. chrome shower curtain rod.	24	No.	6.50	156	6.92	166	13.42	322
17.40 Mail box and house numbers (size .81 x .45 m) for 24 apts.	1	set	62.00	62	402.00	402	464.00	464
17.50 18 mm dia. chrome coat rods.	24	No.	4.05	97	5.87	141	9.92	238
17.60 Drapery tracks.	102	m	4.08	416	9.58	977	13.66	1,393

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

GRANDE PRAIRIE

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
17.70 970 mm high metal balustrade to balconies c/w balusters 100 mm o.c.	98	m	11.73	1,150	47.30	4,635	59.03	5,785
17.80 Metal balustrade to stairs c/w vinyl cap.	66	m	11.73	774	41.80	2,759	53.53	3,533
17.90 50 mm dia. pipe handrail and brackets.	54	m	26.75	1,445	48.75	2,633	75.50	4,077
SUBTOTAL - SPECIALTIES	10.29	/m2 GFA		4,978		14,122		19,100
18. APPLIANCES								
18.10 Freestanding range, 760 mm (30") top four surface elements, oven auto timer.	24	No.	20.00	480	545.00	13,080	565.00	13,560
18.20 Electric refrigerator, manual defrost .37 m3 (13 cu. ft.) capacity	24	No.	20.00	480	530.00	12,720	550.00	13,200
18.30 Range hood	24	No.	20.00	480	112.00	2,688	132.00	3,168
18.40 Coin operated dryer.	2	No.	20.00	40	635.00	1,270	655.00	1,310
18.50 Coin operated washer.	2	No.	20.00	40	835.00	1,670	855.00	1,710
SUBTOTAL - APPLIANCES	17.74	/m2 GFA		1,520		31,428		32,948

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

GRANDE PRAIRIE CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
19. PLUMBING								
19.10 Complete plumbing including : -24 No. water closets -32 No. lavatory basins -24 No. baths (5') - 1 No. mop service basin - 1 No. laundry tub (The above Crane or equal) -24 No. kitchen sinks, compartment, stainless steel. - 1 No. water heater and storage tank, cap. 300 MBH - 1 No. domestic hot water recirculating pump and accessories. - rough-in, waste and vent - roof drains	24	apt.	921.00	22,104	2,163.00	51,912	3,084.00	74,016
SUBTOTAL - PLUMBING	39.86	/m2 GFA		22,104		51,912		74,016
20. HEATING								
20.10 Hot water circulation system (268 m total length) c/w radiators, 24 control valves, one centrifugal circulation pump, complete with all piping, 50 gallon expansion tank, hot water heating boiler and gas supply system.	24	apt.	532.00	12,768	1,230.00	29,520	1,762.00	42,288
SUBTOTAL - HEATING	22.77	/m2 GFA		12,768		29,520		42,288

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

GRANDE PRAIRIE

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
21. VENTILATION								
21.10 Ventilation system, complete for 24-unit apartment building with all ductwork and fans.	24	apt.	96.00	2,304	292.00	7,008	388.00	9,312
SUBTOTAL - VENTILATION	5.01	/m2 GFA		2,304		7,008		9,312
22. FIRE PROTECTION								
22.10 Fire protection system, complete for 24-unit apartment building.	24	apt.	37.00	888	75.00	1,800	112.00	2,688
SUBTOTAL - FIRE PROTECTION	1.45	/m2 GFA		888		1,800		2,688
23. ELECTRICAL								
23.10 Complete electrical installation including fixture supply: fixtures, receptacles and connections for TV, phone and razor; vent fan, door-bell with two presses, 100 A service board and fire alarm system (includes for elect. fixtures.)	24	apt.	970.00	23,280	1,345.00	32,280	2,315.00	55,560
SUBTOTAL - ELECTRICAL	29.92	/m2 GFA		23,280		32,280		55,560

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

GRANDE PRAIRIE

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
24. SITE OVERHEADS								
24.10 Site Overheads								
- setup								
- supervision								
- plant								
- site office								
- small tools								
- security								
- boarding, etc.	24	apt.	1,388.00	33,312	695.35	16,688	2,083.35	50,000
SUBTOTAL - SITE OVERHEADS	26.93	/m2 GFA		33,312		16,688		50,000
25. GENERAL CONTRACTOR'S OVERHEADS & PROFIT								
25.10 General Contractor's Overhead & Profit								
- permits								
- bonds								
- insurance								
- office overhead								
- profit	24	apt.	705.00	16,920	360.00	8,640	1,065.00	25,560
SUBTOTAL - GEN.CONTRACTOR'S OH.& PROFIT	13.76	/m2 GFA		16,920		8,640		25,560
TOTAL - GRANDE PRAIRIE	441.60	/m2 GFA		296,731		523,314		820,045

DETAILED COST ESTIMATES FOR HINTON

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

HINTON

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
1. EXCAVATION									
1.10	Excavate for basement, wall footings, and bases.	891	m3	0.47	419	0.99	882	1.46	1,301
1.20	Backfill to basement walls, footings, and bases.	188	m3	0.42	79	0.89	167	1.31	246
1.30	150 mm gravel or sand bed under slab on grade.	70	m3	3.40	238	6.84	479	10.24	717
1.40	.152 mm polyethylene vapour barrier on gravel or sand bed.	501	m2	0.89	446	0.30	150	1.19	596
	SUBTOTAL - EXCAVATION	1.54	/m2 GFA		1,182		1,679		2,861
2. CONCRETE									
2.10	25 MPa concrete in footings and basement walls (material only) 200 mm reinforced concrete wall, 250 x 560 mm reinforced concrete footing.	58	m3	0.00	0	134.91	7,825	134.91	7,825
2.20	Reinforcing steel in footings and basement walls (material only).	1,652	kg	0.00	0	0.75	1,239	0.75	1,239
2.30	Form, place rebar and pour concrete in footing (560 x 250 mm) -subcontract	222	m	7.34	1,629	2.34	519	9.68	2,149

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

HINTON

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
2.35	Form, place rebar, and pour concrete in basement wall (1.2 m high) (subcontract)	96	m	21.04	2,020	7.40	710	28.44	2,730
2.40	90 mm concrete (20 MPa) in slab on grade.	456	m2	4.36	1,988	10.92	4,980	15.28	6,968
2.45	150 x 150 mm welded wire mesh reinforcement to slab on grade (material only).	456	m2	0.00	0	3.08	1,404	3.08	1,404
2.55	38 mm thick rigid insulation to concrete wall (basement).	117	m2	2.04	239	4.46	522	6.50	761
2.60	Parging to concrete walls.	29	m2	9.16	266	3.76	109	12.92	375
	SUBTOTAL - CONCRETE	12.63	/m2 GFA		6,142		17,309		23,451
3.	DAMPROOFING								
3.10	Two coats asphaltic emulsion on concrete walls.	159	m2	0.30	48	0.30	48	0.60	95
3.20	100 mm perforated plastic weeping tile in crushed gravel surround.	96	m	4.53	435	4.07	391	8.60	826
	SUBTOTAL - DAMPROOFING	0.50	/m2 GFA		483		438		921
4.	SIDING								
4.10	Prefinished aluminum siding	98	m2	7.20	706	12.93	1,267	20.13	1,973

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

HINTON

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
4.40	Stained dark-brown cedar siding 25 x 150 mm channel to column.	700	FBM	0.78	546	1.20	840	1.98	1,386
4.50	Stucco on wire mesh incl. building paper.	678	m2	13.19	8,943	6.90	4,678	20.09	13,621
4.60	24 ga. aluminum vented metal soffit c/w edge moulding.	59	m2	4.50	266	11.88	701	16.38	966
	SUBTOTAL - SIDING	9.66	/m2 GFA		10,460		7,486		17,946
5. ROOFING/SHEET METAL									
5.10	Built-up asphalt roofing completed with mineral granular and flashing.	527	m2	19.80	10,435	21.11	11,125	40.91	21,560
5.30	R.S.I. 6 (R34) batt insulation in joist space.	527	m2	1.64	864	7.80	4,111	9.44	4,975
5.40	.102 mm polyethylene vapour barrier.	580	m2	0.27	157	0.22	128	0.49	284
5.50	Prefinished flashing over window.	66	m	1.36	90	3.52	232	4.88	322
	SUBTOTAL - ROOFING/SHEET METAL	14.61	/m2 GFA		11,545		15,595		27,140

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

HINTON

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6. CARPENTRY (ROUGH)								
6.10 Material Only No. 2 grade fir or spruce as below floor joists (38 x 235 mm) - fir built-up beam (3-38 x 235 mm) - fir built-up beam (2-38 x 235 mm) - fir roof joist (38 x 235 mm) - spruce	38.0	MFBM	0.00	0	771.23	29,307	771.23	29,307
6.20 Material Only No. 2 grade fir or spruce as below framing (38 x140 mm) - fir plate (38 x 140 mm) - fir cross bridging (38 x 38 mm) - spruce framing (38 x 89 mm) - spruce framing (38 x 140 mm) - spruce blocking (38 x 89 mm) - spruce blocking (38 x 140 mm) - spruce wall strapping (38 x 38 mm) - spruce fascia (19 x 140 mm) - spruce	44.0	MFBM	0.00	0	578.90	25,472	578.90	25,472
6.30 Material Only - Sheathing 19 mm plywood (floor underlay) 1432 m2 13 mm tentest (u/s of joist) 1368 m2 10 mm plywood (roof sheathing) 524 m2 13 mm plywood (wall sheathing - protection board 350mm high) 19 m2 8 mm plywood (wall sheathing) 727 m2	4,070	m2	0.00	0	9.84	40,049	9.84	40,049
6.40 Labour Only - complete framing including installation of windows.	1,857	m2	28.87	53,612	0.00	0	28.87	53,612

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

HINTON

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6.50	90 x 238 mm wide R.S.I. 2.1 (R12) batt insulation (vertical eaves).	95	m	0.42	42	0.71	70	1.13	112
	SUBTOTAL - CARPENTRY (ROUGH)	79.99	/m2 GFA		53,653		94,897		148,550
7.	CARPENTRY (FINISH)								
7.10	Stair - 6 flights @ (2x6x8 = 96 risers)								
	38 x 300 mm stringers 59 m								
	38 x 235 mm treads 103 m								
	6 x 275 mm fir plywood in risers 115 m	2	No.	596.00	1,192	403.00	806	999.00	1,998
7.30	Select grade fir in window and door trim and base (40 x 12 mm)								
	- window 431 m								
	- door 555 m								
	- base 2328 m	3,314	m	1.20	3,977	1.13	3,745	2.33	7,722
	SUBTOTAL - CARPENTRY (FINISH)	5.23	/m2 GFA		5,169		4,551		9,720
8.	WINDOWS AND GLAZING								
8.10	Double-glazed patio door in wood frame with aluminum cladding and including hardware (size 2.4 x 1.8 m).	18	No.	0.00	0	924.00	16,632	924.00	16,632
8.20	Double-glazed wired glass sealed window in steel frame (size 2.4 x2.55 m).	4	No.	0.00	0	880.00	3,520	880.00	3,520
8.30	Double-glazed sliding units in wood frame (size 2.4 x .9 m) including aluminum sliders, screen, and hardware.	6	No.	0.00	0	253.00	1,518	253.00	1,518

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

HINTON CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
8.40 Double-glazed sliding units in wood frame (size 1.5 x .9 m) including aluminum sliders, screen, and hardware.	28	No.	0.00	0	170.00	4,760	170.00	4,760
8.50 Double-glazed sliding units in wood frame (size .9 x .9 m) including aluminum sliders, screen, and hardware.	3	No.	0.00	0	138.00	414	138.00	414
SUBTOTAL - WINDOWS AND GLAZING	14.46	/m2 GFA		0		26,844		26,844
9. SEALANTS								
9.10 Caulk (exterior) (exterior doors, windows, junction of siding and concrete).	725	m	0.40	290	0.26	189	0.66	479
9.20 Caulk (interior) - ceramic tile	227	m	1.10	250	0.59	134	1.69	384
SUBTOTAL - SEALANTS	0.46	/m2 GFA		540		322		862
10. Doors								
10.03 Exterior - Aluminum entrance and sidelight, (size 2.4 x 2.1 m overall) including .9 x 2.1 m aluminum glazed door c/w door closer, push and pull, lock and aluminum threshold.	3	No	250.00	750	1,760.00	5,280	2,010.00	6,030

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

HINTON

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
10.06 Fire rated door and sidelight with 0.9 x 2.1 m, 20 min. label wood door and pressed steel frame including hardware and 6 mm wire glass to sidelight - 4 No. 1.9 x 2.1 m - 4 No. 1.4 x 2.1 m	8	No.	197.00	1,576	1,254.00	10,032	1,451.00	11,608
10.09 Solid core door and frame, rotary cut mahogany - 24 No. .9x2.1mx44mm (20 min. label) - 26 No. .85 x 2.1m x 44mm	50	No.	23.50	1,175	213.00	10,650	236.50	11,825
10.10 Solid core door and frame, rotary cut mahogany - 1 No. .9x2.1mx44mm (45 min. label)	1	No.	23.50	24	253.00	253	276.50	277
10.20 Hollow core door and frame, rotary cut mahogany face - 24 No. .70 x 2.0 m x 35mm - 24 No. .75 x 2.0 m x 35mm	48	No.	12.50	600	46.50	2,232	59.00	2,832
10.25 Metal door labelled (1 hour) c/w fire rated pressed steel frame - 1 No. .9 x 2.1 m x 45 mm	1	No.	23.50	24	230.00	230	253.50	254

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

HINTON

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
10.30 Metal folding bi-fold doors, with tracks and pulls - 28 No. 1.8 x 2.0 m - 14 No. 1.5 x 2.0 m - 6 No. 1.2 x 2.0 m - 14 No. 0.9 x 2.0 m - 16 No. 0.6 x 2.0 m	78	No.	13.00	1,014	137.00	10,686	150.00	11,700
SUBTOTAL - DOORS	23.98	/m2 GFA		5,162		39,363		44,525
11. HARDWARE								
11.15 Lock sets to interior doors.	25	set	12.00	300	24.65	616	36.65	916
11.25 Butts to interior doors. (included with frames)	129	pair	0.00	0	0.00	0	0.00	0
11.30 Latch sets.	81	set	8.00	648	12.99	1,052	20.99	1,700
11.40 Bathroom privacy latch sets.	24	set	8.00	192	14.99	360	22.99	552
11.50 Door closers (rated).	14	No.	14.50	203	29.46	412	43.96	615
SUBTOTAL - HARDWARE	2.04	/m2 GFA		1,343		2,441		3,784
12. CERAMIC TILING								
12.10 Ceramic tile 100 x 100 x 6 mm thinset on drywall.	137	m2	25.00	3,425	18.27	2,503	43.27	5,928
SUBTOTAL - CERAMIC TILING	3.19	/m2 GFA		3,425		2,503		5,928

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

HINTON

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13. WALLBOARD								
13.10 Gypsum wallboard (13mm standard) on walls, taped and sanded.	3,906	m2	3.08	12,030	2.73	10,663	5.81	22,694
13.13 Gypsum wallboard (13mm fire rated) taped and sanded. - walls 705 m2 - stair soffit 29 m2	734	m2	3.41	2,503	3.23	2,371	6.64	4,874
13.14 Gypsum wallboard (15.9 mm thick), taped and sanded.	487	m2	3.41	1,661	3.93	1,914	7.34	3,575
13.15 Gypsum wallboard (15.9mm fire rated) to shaft enclosure, taped and sanded.	63	m2	5.55	350	4.19	264	9.74	614
13.16 Gypsum wallboard (15.9mm fire rated with sound barrier) on ceiling, taped and sanded.	1,887	m2	4.46	8,416	4.59	8,661	9.05	17,077
13.17 2 layers gypsum wallboard (15.9mm fire rated with sound barrier) on ceiling,taped and sanded.	4	m2	7.02	28	8.98	36	16.00	64
13.30 Tentest board, Crane 3-183 Redcliffe	524	m2	4.57	2,395	3.88	2,033	8.45	4,428
13.40 Finish to ceilings - textured	1,425	m2	1.24	1,767	1.26	1,796	2.50	3,563

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

HINTON

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13.70 .102 mm polyethylene vapour barrier.	1,346	m2	0.27	363	0.22	296	0.49	660
13.83 Batt insulation RSI - 3.5 (R20) to exterior walls.	728	m2	0.85	619	4.20	3,058	5.05	3,676
13.86 Batt insulation RSI - 3.5 (R20) to interior walls.	908	m2	0.85	772	4.20	3,814	5.05	4,585
SUBTOTAL - WALLBOARD	35.44	/m2 GFA		30,904		34,905		65,809
14. FLOORING								
14.10 Sheet vinyl flooring (.065 gauge) with adhesive to subfloor.	364	m2	5.73	2,086	11.94	4,346	17.67	6,432
14.20 20 oz, 100% Nylon carpet c/w 13 mm thick chip foam underlay.	1,296	m2	3.40	4,406	15.14	19,621	18.54	24,028
14.30 'Neoprene Hypalon' waterproofing or equal to balcony.	67	m2	17.44	1,168	23.18	1,553	40.62	2,722
14.40 Gypcrete floor topping including steel trowel finish.	1,338	m2	7.99	10,691	4.02	5,379	12.01	16,069
SUBTOTAL - FLOORING	26.52	/m2 GFA		18,351		30,899		49,250
15. PAINTING								
15.12 Exterior work - Prepare, prime, two coats enamel on fascia board to balconies and entrance canopy.	26	m2	4.70	122	1.20	31	5.90	153

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

HINTON

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
15.14 Prepare, prime, two coats enamel on metal handrail and balustrade.	783	m	1.52	1,190	0.94	736	2.46	1,926
15.22 Interior work - Prepare, one coat primer sealer, one coat latex or semigloss paint on gypsum wallboard - walls 4962 m2 - ceiling 234 m2	5,196	m2	2.20	11,431	0.70	3,637	2.90	15,068
15.30 Two coats urethane varnish on doors and frames.	105	No.	25.50	2,678	6.01	631	31.51	3,309
15.40 Prepare, prime, one coat semigloss on base, door and window trim.	2,328	m	0.73	1,699	0.17	396	0.90	2,095
15.50 Prepare, prime, one coat semigloss on shelving.	94	m2	2.32	218	0.46	43	2.78	261
SUBTOTAL - PAINTING	12.28	/m2 GFA		17,339		5,474		22,813
16. FITTINGS								
16.10 Shelving - Douglas fir plywood, lipped one edge (20 mm thick x .45 m)	107	m	3.65	391	5.88	629	9.53	1,020

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

HINTON

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
16.20 Vanity and cabinets, plastic laminated top to lower cabinets and c/w drawers, shelves, etc.								
- lower vanity and cupboard	27	m						
- wall units	99	m						
- worktop unit	69	m						
	195	m	30.50	5,948	225.00	43,875	255.50	49,823
SUBTOTAL - FITTINGS	27.38	/m2 GFA		6,338		44,504		50,842
17. SPECIALTIES								
17.10 Washroom accessories - 24 No. toilet paperholders - 24 No. soap dishes - 48 No. towel bars	96	No.	5.50	528	8.80	845	14.30	1,373
17.20 Medicine cabinet	24	No.	11.00	264	58.95	1,415	69.95	1,679
17.30 25 mm dia. chrome shower curtain rod.	24	No.	6.50	156	6.49	156	12.99	312
17.40 Mail box and house numbers (size .81 x .45 m) for 24 apts.	1	set	60.00	60	401.00	401	461.00	461
17.50 18 mm dia. chrome coat rods.	24	No.	3.50	84	4.81	115	8.31	199
17.60 Drapery tracks.	102	m	3.62	369	8.84	902	12.46	1,271

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

HINTON

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
17.70	970 mm high metal balustrade to balconies c/w balusters 100 mm o.c.	98	m	11.35	1,112	45.00	4,410	56.35	5,522
17.80	Metal balustrade to stairs c/w vinyl cap.	66	m	11.35	749	40.00	2,640	51.35	3,389
17.90	50 mm dia. pipe handrail and brackets.	54	m	24.50	1,323	47.06	2,541	71.56	3,864
	SUBTOTAL - SPECIALTIES	9.73	/m2 GFA		4,646		13,425		18,071
18.	APPLIANCES								
18.10	Freestanding range, 760 mm (30") top four surface elements, oven auto timer.	24	No.	17.50	420	539.00	12,936	556.50	13,356
18.20	Electric refrigerator, manual defrost .37 m3 (13 cu. ft.) capacity	24	No.	17.50	420	499.00	11,976	516.50	12,396
18.30	Range hood	24	No.	17.50	420	99.00	2,376	116.50	2,796
18.40	Coin operated dryer.	2	No.	17.50	35	625.00	1,250	642.50	1,285
18.50	Coin operated washer.	2	No.	17.50	35	815.00	1,630	832.50	1,665
	SUBTOTAL - APPLIANCES	16.96	/m2 GFA		1,330		30,168		31,498

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

HINTON

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
19. PLUMBING								
19.10 Complete plumbing including : -24 No. water closets -32 No. lavatory basins -24 No. baths (5') - 1 No. mop service basin - 1 No. laundry tub (The above Crane or equal) -24 No. kitchen sinks, compartment, stainless steel. - 1 No. water heater and storage tank, cap. 300 MBH - 1 No. domestic hot water recirculating pump and accessories. - rough-in, waste and vent - roof drains	24	apt.	772.00	18,528	2,030.00	48,720	2,802.00	67,248
SUBTOTAL - PLUMBING	36.21	/m2 GFA		18,528		48,720		67,248
20. HEATING								
20.10 Hot water circulation system (268 m total length) c/w radiators, 24 control valves, one centrifugal circulation pump, complete with all piping, 50 gallon expansion tank, hot water heating boiler and gas supply system.	24	apt.	454.00	10,896	1,180.00	28,320	1,634.00	39,216
SUBTOTAL - HEATING	21.12	/m2 GFA		10,896		28,320		39,216

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

HINTON

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
21. VENTILATION								
21.10 Ventilation system, complete for 24-unit apartment building with all ductwork and fans.	24	apt.	95.50	2,292	291.00	6,984	386.50	9,276
SUBTOTAL - VENTILATION	5.00	/m2 GFA		2,292		6,984		9,276
22. FIRE PROTECTION								
22.10 Fire protection system, complete for 24-unit apartment building.	24	apt.	37.00	888	75.00	1,800	112.00	2,688
SUBTOTAL - FIRE PROTECTION	1.45	/m2 GFA		888		1,800		2,688
23. ELECTRICAL								
23.10 Complete electrical installation including fixture supply: fixtures, receptacles and connections for TV, phone and razor; vent fan, door-bell with two presses, 100 A service board and fire alarm system (includes for elect. fixtures.)	24	apt.	900.00	21,600	1,400.00	33,600	2,300.00	55,200
SUBTOTAL - ELECTRICAL	29.73	/m2 GFA		21,600		33,600		55,200

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

HINTON CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
24. SITE OVERHEADS								
24.10 Site Overheads								
- setup								
- supervision								
- plant								
- site office								
- small tools								
- security								
- boarding, etc.	24	apt.	1,388.00	33,312	695.35	16,688	2,083.35	50,000
SUBTOTAL - SITE OVERHEADS	26.93	/m2 GFA		33,312		16,688		50,000
25. GENERAL CONTRACTOR'S OVERHEADS & PROFIT								
25.10 General Contractor's Overhead & Profit								
- permits								
- bonds								
- insurance								
- office overhead								
- profit	24	apt.	706.00	16,944	358.00	8,592	1,064.00	25,536
SUBTOTAL - GEN.CONTRACTOR'S OH.& PROFIT	13.75	/m2 GFA		16,944		8,592		25,536
TOTAL - HINTON	430.79	/m2 GFA		282,472		517,507		799,979

DETAILED COST ESTIMATES FOR LETHBRIDGE

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LETHBRIDGE

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
1. EXCAVATION									
1.10	Excavate for basement, wall footings, and bases.	891	m3	0.43	383	1.43	1,274	1.86	1,657
1.20	Backfill to basement walls, footings, and bases.	188	m3	0.40	75	1.39	261	1.79	337
1.30	150 mm gravel or sand bed under slab on grade.	70	m3	3.20	224	11.97	838	15.17	1,062
1.40	.152 mm polyethylene vapour barrier on gravel or sand bed.	501	m2	0.89	446	0.28	140	1.17	586
	SUBTOTAL - EXCAVATION	1.96	/m2 GFA		1,128		2,514		3,642
2. CONCRETE									
2.10	25 MPa concrete in footings and basement walls (material only) 200 mm reinforced concrete wall, 250 x 560 mm reinforced concrete footing.	58	m3	0.00	0	105.00	6,090	105.00	6,090
2.20	Reinforcing steel in footings and basement walls (material only).	1,652	kg	0.00	0	0.74	1,222	0.74	1,222
2.30	Form, place rebar and pour concrete in footing (560 x 250 mm) -subcontract	222	m	6.19	1,374	2.40	533	8.59	1,907

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LETHBRIDGE

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
2.35	Form, place rebar, and pour concrete in basement wall (1.2 m high) (subcontract)	96	m	17.79	1,708	7.57	727	25.36	2,435
2.40	90 mm concrete (20 MPa) in slab on grade.	456	m2	3.84	1,751	8.49	3,871	12.33	5,622
2.45	150 x 150 mm welded wire mesh reinforcement to slab on grade (material only).	456	m2	0.00	0	2.99	1,363	2.99	1,363
2.55	38 mm thick rigid insulation to concrete wall (basement).	117	m2	2.24	262	4.68	548	6.92	810
2.60	Parging to concrete walls.	29	m2	9.30	270	2.89	84	12.19	354
	SUBTOTAL - CONCRETE	10.66	/m2 GFA		5,365		14,438		19,803
3.	DAMPROOFING								
3.10	Two coats asphaltic emulsion on concrete walls.	159	m2	0.34	54	0.30	48	0.64	102
3.20	100 mm perforated plastic weeping tile in crushed gravel surround.	96	m	4.60	442	4.04	388	8.64	829
	SUBTOTAL - DAMPROOFING	0.50	/m2 GFA		496		436		932
4.	SIDING								
4.10	Prefinished aluminum siding	98	m2	4.89	479	15.05	1,475	19.94	1,954

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LETHBRIDGE

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
4.40	Stained dark-brown cedar siding 25 x 150 mm channel to column.	700	FBM	0.82	574	1.33	931	2.15	1,505
4.50	Stucco on wire mesh incl. building paper.	678	m2	12.52	8,489	6.57	4,454	19.09	12,943
4.60	24 ga. aluminum vented metal soffit c/w edge moulding.	59	m2	4.93	291	10.60	625	15.53	916
	SUBTOTAL - SIDING	9.33	/m2 GFA		9,833		7,486		17,319
5.	ROOFING/SHEET METAL								
5.10	Built-up asphalt roofing completed with mineral granular and flashing.	527	m2	19.94	10,508	17.21	9,070	37.15	19,578
5.30	R.S.I. 6 (R34) batt insulation in joist space.	527	m2	1.80	949	8.44	4,448	10.24	5,396
5.40	.102 mm polyethylene vapour barrier.	580	m2	0.33	191	0.24	139	0.57	331
5.50	Prefinished flashing over window.	66	m	1.49	98	3.15	208	4.64	306
	SUBTOTAL - ROOFING/SHEET METAL	13.79	/m2 GFA		11,747		13,865		25,612

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LETHBRIDGE

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6. CARPENTRY (ROUGH)								
6.10 Material Only No. 2 grade fir or spruce as below floor joists (38 x 235 mm) - fir built-up beam (3-38 x 235 mm) - fir built-up beam (2-38 x 235 mm) - fir roof joist (38 x 235 mm) - spruce	38.0	MFBM	0.00	0	779.00	29,602	779.00	29,602
6.20 Material Only No. 2 grade fir or spruce as below framing (38 x140 mm) - fir plate (38 x 140 mm) - fir cross bridging (38 x 38 mm) - spruce framing (38 x 89 mm) - spruce framing (38 x 140 mm) - spruce blocking (38 x 89 mm) - spruce blocking (38 x 140 mm) - spruce wall strapping (38 x 38 mm) - spruce fascia (19 x 140 mm) - spruce	44.0	MFBM	0.00	0	584.67	25,725	584.67	25,725
6.30 Material Only - Sheathing 19 mm plywood (floor underlay) 1432 m2 13 mm tentest (u/s of joist) 1368 m2 10 mm plywood (roof sheathing) 524 m2 13 mm plywood (wall sheathing - protection board 350mm high) 19 m2 8 mm plywood (wall sheathing) 727 m2	4,070	m2	0.00	0	9.12	37,118	9.12	37,118
6.40 Labour Only - complete framing including installation of windows.	1,857	m2	27.22	50,548	0.00	0	27.22	50,548

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LETHBRIDGE

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6.50	90 x 238 mm wide R.S.I. 2.1 (R12) batt insulation (vertical eaves).	99	m	0.46	46	0.76	75	1.22	121
	SUBTOTAL - CARPENTRY (ROUGH)	77.07	/m2 GFA		50,593		92,521		143,114
7.	CARPENTRY (FINISH)								
7.10	Stair - 6 flights @ (2x6x8 = 96 risers) 38 x 300 mm stringers 59 m 38 x 235 mm treads 103 m 6 x 275 mm fir plywood in risers 115 m	2	No.	604.00	1,208	417.00	834	1,021.00	2,042
7.30	Select grade fir in window and door trim and base (40 x 12 mm) - window 431 m - door 555 m - base 2328 m	3,314	m	1.22	4,043	1.20	3,977	2.42	8,020
	SUBTOTAL - CARPENTRY (FINISH)	5.42	/m2 GFA		5,251		4,811		10,062
8.	WINDOWS AND GLAZING								
8.10	Double-glazed patio door in wood frame with aluminum cladding and including hardware (size 2.4 x 1.8 m).	18	No.	0.00	0	920.00	16,560	920.00	16,560
8.20	Double-glazed wired glass sealed window in steel frame (size 2.4 x2.55 m).	4	No.	0.00	0	870.00	3,480	870.00	3,480
8.30	Double-glazed sliding units in wood frame (size 2.4 x .9 m) including aluminum sliders, screen, and hardware.	6	No.	0.00	0	248.00	1,488	248.00	1,488

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LETHBRIDGE

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
8.40 Double-glazed sliding units in wood frame (size 1.5 x .9 m) including aluminum sliders, screen, and hardware.	28	No.	0.00	0	168.00	4,704	168.00	4,704
8.50 Double-glazed sliding units in wood frame (size .9 x .9 m) including aluminum sliders, screen, and hardware.	3	No.	0.00	0	137.00	411	137.00	411
SUBTOTAL - WINDOWS AND GLAZING	14.35	/m2 GFA		0		26,643		26,643
9. SEALANTS								
9.10 Caulk (exterior) (exterior doors, windows, junction of siding and concrete).	725	m	0.41	297	0.25	181	0.66	479
9.20 Caulk (interior) - ceramic tile	227	m	1.08	245	0.59	134	1.67	379
SUBTOTAL - SEALANTS	0.46	/m2 GFA		542		315		857
10. Doors								
10.03 Exterior - Aluminum entrance and sidelight, (size 2.4 x 2.1 m overall) including .9 x 2.1 m aluminum glazed door c/w door closer, push and pull, lock and aluminum threshold.	3	No	256.00	768	1,780.00	5,340	2,036.00	6,108

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LETHBRIDGE

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
10.06 Fire rated door and sidelight with 0.9 x 2.1 m, 20 min. label wood door and pressed steel frame including hardware and 6 mm wire glass to sidelight - 4 No. 1.9 x 2.1 m - 4 No. 1.4 x 2.1 m	8	No.	198.00	1,584	1,242.00	9,936	1,440.00	11,520
10.09 Solid core door and frame, rotary cut mahogany - 24 No. .9x2.1mx44mm (20 min. label) - 26 No. .85 x 2.1m x 44mm	50	No.	23.00	1,150	189.00	9,450	212.00	10,600
10.10 Solid core door and frame, rotary cut mahogany - 1 No. .9x2.1mx44mm (45 min. label)	1	No.	23.00	23	236.00	236	259.00	259
10.20 Hollow core door and frame, rotary cut mahogany face - 24 No. .70 x 2.0 m x 35mm - 24 No. .75 x 2.0 m x 35mm	48	No.	12.75	612	39.99	1,920	52.74	2,532
10.25 Metal door labelled (1 hour) c/w fire rated pressed steel frame - 1 No. .9 x 2.1 m x 45 mm	1	No.	23.00	23	214.00	214	237.00	237

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LETHBRIDGE

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
10.30 Metal folding bi-fold doors, with tracks and pulls - 28 No. 1.8 x 2.0 m - 14 No. 1.5 x 2.0 m - 6 No. 1.2 x 2.0 m - 14 No. 0.9 x 2.0 m - 16 No. 0.6 x 2.0 m	78	No.	12.75	995	126.00	9,828	138.75	10,823
SUBTOTAL - DOORS	22.66	/m2 GFA		5,155		36,924		42,079
11. HARDWARE								
11.15 Lock sets to interior doors.	25	set	11.32	283	23.79	595	35.11	878
11.25 Butts to interior doors. (included with frames)	129	pair	0.00	0	0.00	0	0.00	0
11.30 Latch sets.	81	set	9.00	729	13.78	1,116	22.78	1,845
11.40 Bathroom privacy latch sets.	24	set	9.00	216	15.90	382	24.90	598
11.50 Door closers (rated).	14	No.	13.75	193	29.50	413	43.25	606
SUBTOTAL - HARDWARE	2.11	/m2 GFA		1,421		2,506		3,927
12. CERAMIC TILING								
12.10 Ceramic tile 100 x 100 x 6 mm thinset on drywall.	137	m2	21.62	2,962	23.80	3,261	45.42	6,223
SUBTOTAL - CERAMIC TILING	3.35	/m2 GFA		2,962		3,261		6,223

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LETHBRIDGE

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13. WALLBOARD								
13.10 Gypsum wallboard (13mm standard) on walls, taped and sanded.	3,906	m2	2.54	9,921	2.18	8,515	4.72	18,436
13.13 Gypsum wallboard (13mm fire rated) taped and sanded. - walls 705 m2 - stair soffit 29 m2	734	m2	2.78	2,041	2.68	1,967	5.46	4,008
13.14 Gypsum wallboard (15.9 mm thick), taped and sanded.	487	m2	2.78	1,354	3.25	1,583	6.03	2,937
13.15 Gypsum wallboard (15.9mm fire rated) to shaft enclosure, taped and sanded.	63	m2	4.97	313	3.51	221	8.48	534
13.16 Gypsum wallboard (15.9mm fire rated with sound barrier) on ceiling, taped and sanded.	1,887	m2	3.84	7,246	3.72	7,020	7.56	14,266
13.17 2 layers gypsum wallboard (15.9mm fire rated with sound barrier) on ceiling,taped and sanded.	4	m2	5.65	23	7.62	30	13.27	53
13.30 Tentest board, Crane 3-183 Redcliffe	524	m2	4.11	2,154	2.98	1,562	7.09	3,715
13.40 Finish to ceilings - textured	1,425	m2	1.28	1,824	1.17	1,667	2.45	3,491

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LETHBRIDGE

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13.70 .102 mm polyethylene vapour barrier.	1,346	m2	0.33	444	0.24	323	0.57	767
13.83 Batt insulation RSI - 3.5 (R20) to exterior walls.	728	m2	0.97	706	4.49	3,269	5.46	3,975
13.86 Batt insulation RSI - 3.5 (R20) to interior walls.	908	m2	0.97	881	4.49	4,077	5.46	4,958
SUBTOTAL - WALLBOARD	30.77	/m2 GFA		26,906		30,234		57,140
14. FLOORING								
14.10 Sheet vinyl flooring (.065 gauge) with adhesive to subfloor.	364	m2	5.90	2,148	11.58	4,215	17.48	6,363
14.20 20 oz, 100% Nylon carpet c/w 13 mm thick chip foam underlay.	1,296	m2	3.31	4,290	15.01	19,453	18.32	23,743
14.30 'Neoprene Hypalon' waterproofing or equal to balcony.	67	m2	18.30	1,226	23.03	1,543	41.33	2,769
14.40 Gypcrete floor topping including steel trowel finish.	1,338	m2	8.36	11,186	3.99	5,339	12.35	16,524
SUBTOTAL - FLOORING	26.60	/m2 GFA		18,849		30,550		49,399
15. PAINTING								
15.12 Exterior work - Prepare, prime, two coats enamel on fascia board to balconies and entrance canopy.	26	m2	4.33	113	1.21	31	5.54	144

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LETHBRIDGE

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
15.14 Prepare, prime, two coats enamel on metal handrail and balustrade.	783	m	1.45	1,135	0.87	681	2.32	1,817
15.22 Interior work - Prepare, one coat primer sealer, one coat latex or semigloss paint on gypsum wallboard - walls 4962 m2 - ceiling 234 m2	5,196	m2	2.30	11,951	0.70	3,637	3.00	15,588
15.30 Two coats urethane varnish on doors and frames.	105	No.	25.00	2,625	6.02	632	31.02	3,257
15.40 Prepare, prime, one coat semigloss on base, door and window trim.	2,328	m	0.74	1,723	0.18	419	0.92	2,142
15.50 Prepare, prime, one coat semigloss on shelving.	94	m2	2.20	207	0.44	41	2.64	248
SUBTOTAL - PAINTING	12.49	/m2 GFA		17,753		5,442		23,195
16. FITTINGS								
16.10 Shelving - Douglas fir plywood, lipped one edge (20 mm thick x .45 m)	107	m	3.87	414	6.21	664	10.08	1,079

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LETHBRIDGE

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
16.20 Vanity and cabinets, plastic laminated top to lower cabinets and c/w drawers, shelves, etc.								
- lower vanity and cupboard	27	m						
- wall units	99	m						
- worktop unit	69	m						
	195	m	31.00	6,045	228.00	44,460	259.00	50,505
SUBTOTAL - FITTINGS	27.78	/m2 GFA		6,459		45,124		51,583
17. SPECIALTIES								
17.10 Washroom accessories - 24 No. toilet paperholders - 24 No. soap dishes - 48 No. towel bars	96	No.	6.46	620	8.80	845	15.26	1,465
17.20 Medicine cabinet	24	No.	12.00	288	63.54	1,525	75.54	1,813
17.30 25 mm dia. chrome shower curtain rod.	24	No.	4.72	113	6.60	158	11.32	272
17.40 Mail box and house numbers (size .81 x .45 m) for 24 apts.	1	set	60.00	60	388.00	388	448.00	448
17.50 18 mm dia. chrome coat rods.	24	No.	3.95	95	5.50	132	9.45	227
17.60 Drapery tracks.	102	m	3.52	359	8.58	875	12.10	1,234

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LETHBRIDGE

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
17.70 970 mm high metal balustrade to balconies c/w balusters 100 mm o.c.	98	m	12.25	1,201	44.20	4,332	56.45	5,532
17.80 Metal balustrade to stairs c/w vinyl cap.	66	m	12.25	809	32.76	2,162	45.01	2,971
17.90 50 mm dia. pipe handrail and brackets.	54	m	25.00	1,350	45.08	2,434	70.08	3,784
SUBTOTAL - SPECIALTIES	9.56	/m2 GFA		4,894		12,851		17,745
18. APPLIANCES								
18.10 Freestanding range, 760 mm (30") top four surface elements, oven auto timer.	24	No.	18.00	432	539.00	12,936	557.00	13,368
18.20 Electric refrigerator, manual defrost .37 m3 (13 cu. ft.) capacity	24	No.	18.00	432	499.00	11,976	517.00	12,408
18.30 Range hood	24	No.	18.00	432	110.00	2,640	128.00	3,072
18.40 Coin operated dryer.	2	No.	18.00	36	625.00	1,250	643.00	1,286
18.50 Coin operated washer.	2	No.	18.00	36	815.00	1,630	833.00	1,666
SUBTOTAL - APPLIANCES	17.12	/m2 GFA		1,368		30,432		31,800

1988 ALBERTA HOUSE COST COMPARISON STUDY

SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LETHBRIDGE

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
19. PLUMBING								
19.10 Complete plumbing including : -24 No. water closets -32 No. lavatory basins -24 No. baths (5') - 1 No. mop service basin - 1 No. laundry tub (The above Crane or equal) -24 No. kitchen sinks, compartment, stainless steel. - 1 No. water heater and storage tank, cap. 300 MBH - 1 No. domestic hot water recirculating pump and accessories. - rough-in, waste and vent - roof drains	24	apt.	642.00	15,408	1,980.00	47,520	2,622.00	62,928
SUBTOTAL - PLUMBING	33.89	/m2 GFA		15,408		47,520		62,928
20. HEATING								
20.10 Hot water circulation system (268 m total length) c/w radiators, 24 control valves, one centrifugal circulation pump, complete with all piping, 50 gallon expansion tank, hot water heating boiler and gas supply system.	24	apt.	335.00	8,040	840.00	20,160	1,175.00	28,200
SUBTOTAL - HEATING	15.19	/m2 GFA		8,040		20,160		28,200

1988 ALBERTA HOUSE COST COMPARISON STUDY

SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LETHBRIDGE

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
21. VENTILATION								
21.10 Ventilation system, complete for 24-unit apartment building with all ductwork and fans.	24	apt.	90.00	2,160	267.00	6,408	357.00	8,568
SUBTOTAL - VENTILATION	4.61	/m2 GFA		2,160		6,408		8,568
22. FIRE PROTECTION								
22.10 Fire protection system, complete for 24-unit apartment building.	24	apt.	32.00	768	59.00	1,416	91.00	2,184
SUBTOTAL - FIRE PROTECTION	1.18	/m2 GFA		768		1,416		2,184
23. ELECTRICAL								
23.10 Complete electrical installation including fixture supply: fixtures, receptacles and connections for TV, phone and razor; vent fan, door-bell with two presses, 100 A service board and fire alarm system (includes for elect. fixtures.)	24	apt.	796.00	19,104	1,070.00	25,680	1,866.00	44,784
SUBTOTAL - ELECTRICAL	24.12	/m2 GFA		19,104		25,680		44,784

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LETHBRIDGE

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
24. SITE OVERHEADS								
24.10 Site Overheads								
- setup								
- supervision								
- plant								
- site office								
- small tools								
- security								
- boarding, etc.	24	apt.	1,388.00	33,312	695.35	16,688	2,083.35	50,000
SUBTOTAL - SITE OVERHEADS	26.93	/m2 GFA		33,312		16,688		50,000
25. GENERAL CONTRACTOR'S OVERHEADS & PROFIT								
25.10 General Contractor's Overhead & Profit								
- permits								
- bonds								
- insurance								
- office overhead								
- profit	24	apt.	709.00	17,016	366.00	8,784	1,075.00	25,800
SUBTOTAL - GEN.CONTRACTOR'S OH.& PROFIT	13.89	/m2 GFA		17,016		8,784		25,800
TOTAL - LETHBRIDGE	405.78	/m2 GFA		266,530		487,009		753,539

DETAILED COST ESTIMATES FOR MEDICINE HAT

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

MEDICINE HAT

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
1. EXCAVATION									
1.10	Excavate for basement, wall footings, and bases.	891	m3	0.57	508	0.97	864	1.54	1,372
1.20	Backfill to basement walls, footings, and bases.	188	m3	0.54	102	0.93	175	1.47	276
1.30	150 mm gravel or sand bed under slab on grade.	70	m3	3.23	226	9.42	659	12.65	886
1.40	.152 mm polyethylene vapour barrier on gravel or sand bed.	501	m2	0.89	446	0.29	145	1.18	591
	SUBTOTAL - EXCAVATION	1.68	/m2 GFA		1,281		1,844		3,125
2. CONCRETE									
2.10	25 MPa concrete in footings and basement walls (material only) 200 mm reinforced concrete wall, 250 x 560 mm reinforced concrete footing.	58	m3	0.00	0	117.60	6,821	117.60	6,821
2.20	Reinforcing steel in footings and basement walls (material only).	1,652	kg	0.00	0	0.74	1,222	0.74	1,222
2.30	Form, place rebar and pour concrete in footing (560 x 250 mm) -subcontract	222	m	6.98	1,550	2.29	508	9.27	2,058

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

MEDICINE HAT

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
2.35	Form, place rebar, and pour concrete in basement wall (1.2 m high) (subcontract)	96	m	20.01	1,921	7.82	751	27.83	2,672
2.40	90 mm concrete (20 MPa) in slab on grade.	456	m2	4.14	1,888	8.80	4,013	12.94	5,901
2.45	150 x 150 mm welded wire mesh reinforcement to slab on grade (material only).	456	m2	0.00	0	2.99	1,363	2.99	1,363
2.55	38 mm thick rigid insulation to concrete wall (basement).	117	m2	2.21	259	4.64	543	6.85	801
2.60	Parging to concrete walls.	29	m2	9.62	279	3.14	91	12.76	370
	SUBTOTAL - CONCRETE	11.42	/m2 GFA		5,896		15,313		21,209
3.	DAMPROOFING								
3.10	Two coats asphaltic emulsion on concrete walls.	159	m2	0.36	57	0.31	49	0.67	107
3.20	100 mm perforated plastic weeping tile in crushed gravel surround.	96	m	3.91	375	4.32	415	8.23	790
	SUBTOTAL - DAMPROOFING	0.48	/m2 GFA		433		464		897
4.	SIDING								
4.10	Prefinished aluminum siding	98	m2	4.74	465	12.70	1,245	17.44	1,709

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

MEDICINE HAT

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
4.40	Stained dark-brown cedar siding 25 x 150 mm channel to column.	700	FBM	0.75	525	1.22	854	1.97	1,379
4.50	Stucco on wire mesh incl. building paper.	678	m2	12.51	8,482	6.58	4,461	19.09	12,943
4.60	24 ga. aluminum vented metal soffit c/w edge moulding.	59	m2	4.53	267	14.12	833	18.65	1,100
	SUBTOTAL - SIDING	9.23	/m2 GFA		9,739		7,393		17,132
5.	ROOFING/SHEET METAL								
5.10	Built-up asphalt roofing completed with mineral granular and flashing.	527	m2	20.40	10,751	18.16	9,570	38.56	20,321
5.30	R.S.I. 6 (R34) batt insulation in joist space.	527	m2	1.76	928	8.42	4,437	10.18	5,365
5.40	.102 mm polyethylene vapour barrier.	580	m2	0.28	162	0.24	139	0.52	302
5.50	Prefinished flashing over window.	66	m	1.40	92	4.54	300	5.94	392
	SUBTOTAL - ROOFING/SHEET METAL	14.21	/m2 GFA		11,933		14,447		26,380

1988 ALBERTA HOUSE COST COMPARISON STUDY

SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

MEDICINE HAT

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6. CARPENTRY (ROUGH)								
6.10 Material Only No. 2 grade fir or spruce as below floor joists (38 x 235 mm) - fir built-up beam (3-38 x 235 mm) - fir built-up beam (2-38 x 235 mm) - fir roof joist (38 x 235 mm) - spruce	38.0	MFBM	0.00	0	748.00	28,424	748.00	28,424
6.20 Material Only No. 2 grade fir or spruce as below framing (38 x140 mm) - fir plate (38 x 140 mm) - fir cross bridging (38 x 38 mm) - spruce framing (38 x 89 mm) - spruce framing (38 x 140 mm) - spruce blocking (38 x 89 mm) - spruce blocking (38 x 140 mm) - spruce wall strapping (38 x 38 mm) - spruce fascia (19 x 140 mm) - spruce	44.0	MFBM	0.00	0	559.00	24,596	559.00	24,596
6.30 Material Only - Sheathing 19 mm plywood (floor underlay) 1432 m2 13 mm tentest (u/s of joist) 1368 m2 10 mm plywood (roof sheathing) 524 m2 13 mm plywood (wall sheathing - protection board 350mm high) 19 m2 8 mm plywood (wall sheathing) 727 m2	4,070	m2	0.00	0	8.88	36,142	8.88	36,142
6.40 Labour Only - complete framing including installation of windows.	1,857	m2	23.80	44,197	0.00	0	23.80	44,197

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

MEDICINE HAT

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6.50	90 x 238 mm wide R.S.I. 2.1 (R12) batt insulation (vertical eaves).	99	m	0.45	45	0.76	75	1.21	120
	SUBTOTAL - CARPENTRY (ROUGH)	71.88	/m2 GFA		44,241		89,237		133,478
7.	CARPENTRY (FINISH)								
7.10	Stair - 6 flights @ (2x6x8 = 96 risers)								
	38 x 300 mm stringers 59 m								
	38 x 235 mm treads 103 m								
	6 x 275 mm fir plywood in risers 115 m	2	No.	665.00	1,330	400.00	800	1,065.00	2,130
7.30	Select grade fir in window and door trim and base (40 x 12 mm)								
	- window 431 m								
	- door 555 m								
	- base 2328 m	3,314	m	1.20	3,977	1.19	3,944	2.39	7,920
	SUBTOTAL - CARPENTRY (FINISH)	5.41	/m2 GFA		5,307		4,744		10,051
8.	WINDOWS AND GLAZING								
8.10	Double-glazed patio door in wood frame with aluminum cladding and including hardware (size 2.4 x 1.8 m).	18	No.	0.00	0	921.00	16,578	921.00	16,578
8.20	Double-glazed wired glass sealed window in steel frame (size 2.4 x2.55 m).	4	No.	0.00	0	892.00	3,568	892.00	3,568
8.30	Double-glazed sliding units in wood frame (size 2.4 x .9 m) including aluminum sliders, screen, and hardware.	6	No.	0.00	0	255.00	1,530	255.00	1,530

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

MEDICINE HAT CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
8.40 Double-glazed sliding units in wood frame (size 1.5 x .9 m) including aluminum sliders, screen, and hardware.	28	No.	0.00	0	174.00	4,872	174.00	4,872
8.50 Double-glazed sliding units in wood frame (size .9 x .9 m) including aluminum sliders, screen, and hardware.	3	No.	0.00	0	142.00	426	142.00	426
SUBTOTAL - WINDOWS AND GLAZING	14.53	/m2 GFA		0		26,974		26,974
9. SEALANTS								
9.10 Caulk (exterior) (exterior doors, windows, junction of siding and concrete).	725	m	0.41	297	0.25	181	0.66	479
9.20 Caulk (interior) - ceramic tile	227	m	1.13	257	0.59	134	1.72	390
SUBTOTAL - SEALANTS	0.47	/m2 GFA		554		315		869
10. Doors								
10.03 Exterior - Aluminum entrance and sidelight, (size 2.4 x 2.1 m overall) including .9 x 2.1 m aluminum glazed door c/w door closer, push and pull, lock and aluminum threshold.	3	No	253.00	759	1,695.00	5,085	1,948.00	5,844

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

MEDICINE HAT

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
10.06 Fire rated door and sidelight with 0.9 x 2.1 m, 20 min. label wood door and pressed steel frame including hardware and 6 mm wire glass to sidelight - 4 No. 1.9 x 2.1 m - 4 No. 1.4 x 2.1 m	8	No.	202.00	1,616	1,180.00	9,440	1,382.00	11,056
10.09 Solid core door and frame, rotary cut mahogany - 24 No. .9x2.1mx44mm (20 min. label) - 26 No. .85 x 2.1m x 44mm	50	No.	23.50	1,175	180.00	9,000	203.50	10,175
10.10 Solid core door and frame, rotary cut mahogany - 1 No. .9x2.1mx44mm (45 min. label)	1	No.	23.50	24	228.00	228	251.50	252
10.20 Hollow core door and frame, rotary cut mahogany face - 24 No. .70 x 2.0 m x 35mm - 24 No. .75 x 2.0 m x 35mm	48	No.	13.00	624	39.99	1,920	52.99	2,544
10.25 Metal door labelled (1 hour) c/w fire rated pressed steel frame - 1 No. .9 x 2.1 m x 45 mm	1	No.	23.50	24	210.00	210	233.50	234

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

MEDICINE HAT

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
10.30 Metal folding bi-fold doors, with tracks and pulls - 28 No. 1.8 x 2.0 m - 14 No. 1.5 x 2.0 m - 6 No. 1.2 x 2.0 m - 14 No. 0.9 x 2.0 m - 16 No. 0.6 x 2.0 m	78	No.	13.00	1,014	128.00	9,984	141.00	10,998
SUBTOTAL - DOORS	22.13	/m2 GFA		5,235		35,867		41,102
11. HARDWARE								
11.15 Lock sets to interior doors.	25	set	12.20	305	24.73	618	36.93	923
11.25 Butts to interior doors. (included with frames)	129	pair	0.00	0	0.00	0	0.00	0
11.30 Latch sets.	81	set	9.00	729	12.99	1,052	21.99	1,781
11.40 Bathroom privacy latch sets.	24	set	9.00	216	14.99	360	23.99	576
11.50 Door closers (rated).	14	No.	13.75	193	30.74	430	44.49	623
SUBTOTAL - HARDWARE	2.10	/m2 GFA		1,443		2,461		3,904
12. CERAMIC TILING								
12.10 Ceramic tile 100 x 100 x 6 mm thinset on drywall.	137	m2	23.20	3,178	23.79	3,259	46.99	6,438
SUBTOTAL - CERAMIC TILING	3.47	/m2 GFA		3,178		3,259		6,437

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

MEDICINE HAT

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13. WALLBOARD								
13.10 Gypsum wallboard (13mm standard) on walls, taped and sanded.	3,906	m2	2.62	10,234	2.18	8,515	4.80	18,749
13.13 Gypsum wallboard (13mm fire rated) taped and sanded. - walls 705 m2 - stair soffit 29 m2	734	m2	2.83	2,077	2.71	1,989	5.54	4,066
13.14 Gypsum wallboard (15.9 mm thick), taped and sanded.	487	m2	2.83	1,378	3.34	1,627	6.17	3,005
13.15 Gypsum wallboard (15.9mm fire rated) to shaft enclosure, taped and sanded.	63	m2	5.23	329	3.56	224	8.79	554
13.16 Gypsum wallboard (15.9mm fire rated with sound barrier) on ceiling, taped and sanded.	1,887	m2	3.97	7,491	3.79	7,152	7.76	14,643
13.17 2 layers gypsum wallboard (15.9mm fire rated with sound barrier) on ceiling,taped and sanded.	4	m2	5.93	24	7.65	31	13.58	54
13.30 Tentest board, Crane 3-183 Redcliffe	524	m2	4.41	2,311	3.02	1,582	7.43	3,893
13.40 Finish to ceilings - textured	1,425	m2	1.32	1,881	1.19	1,696	2.51	3,577

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

MEDICINE HAT

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13.70 .102 mm polyethylene vapour barrier.	1,346	m2	0.28	377	0.24	323	0.52	700
13.83 Batt insulation RSI - 3.5 (R20) to exterior walls.	728	m2	0.99	721	4.41	3,210	5.40	3,931
13.86 Batt insulation RSI - 3.5 (R20) to interior walls.	908	m2	0.99	899	4.41	4,004	5.40	4,903
SUBTOTAL - WALLBOARD	31.27	/m2 GFA		27,722		30,353		58,075
14. FLOORING								
14.10 Sheet vinyl flooring (.065 gauge) with adhesive to subfloor.	364	m2	6.04	2,199	11.97	4,357	18.01	6,556
14.20 20 oz, 100% Nylon carpet c/w 13 mm thick chip foam underlay.	1,296	m2	3.92	5,080	15.20	19,699	19.12	24,780
14.30 'Neoprene Hypalon' waterproofing or equal to balcony.	67	m2	19.02	1,274	23.24	1,557	42.26	2,831
14.40 Gypcrete floor topping including steel trowel finish.	1,338	m2	8.46	11,319	4.02	5,379	12.48	16,698
SUBTOTAL - FLOORING	27.39	/m2 GFA		19,873		30,992		50,865
15. PAINTING								
15.12 Exterior work - Prepare, prime, two coats enamel on fascia board to balconies and entrance canopy.	26	m2	4.62	120	1.30	34	5.92	154

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

MEDICINE HAT

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
15.14 Prepare, prime, two coats enamel on metal handrail and balustrade.	783	m	1.89	1,480	0.87	681	2.76	2,161
15.22 Interior work - Prepare, one coat primer sealer, one coat latex or semigloss paint on gypsum wallboard - walls 4962 m2 - ceiling 234 m2	5,196	m2	2.24	11,639	0.70	3,637	2.94	15,276
15.30 Two coats urethane varnish on doors and frames.	105	No.	24.86	2,610	6.49	681	31.35	3,292
15.40 Prepare, prime, one coat semigloss on base, door and window trim.	2,328	m	0.89	2,072	0.20	466	1.09	2,538
15.50 Prepare, prime, one coat semigloss on shelving.	94	m2	2.53	238	0.44	41	2.97	279
SUBTOTAL - PAINTING	12.76	/m2 GFA		18,159		5,541		23,700
16. FITTINGS								
16.10 Shelving - Douglas fir plywood, lipped one edge (20 mm thick x .45 m)	107	m	4.21	450	6.58	704	10.79	1,155

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

MEDICINE HAT

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
16.20 Vanity and cabinets, plastic laminated top to lower cabinets and c/w drawers, shelves, etc.								
- lower vanity and cupboard	27	m						
- wall units	99	m						
- worktop unit	69	m						
	195	m	32.86	6,408	221.00	43,095	253.86	49,503
SUBTOTAL - FITTINGS	27.28	/m2 GFA		6,858		43,799		50,657
17. SPECIALTIES								
17.10 Washroom accessories - 24 No. toilet paperholders - 24 No. soap dishes - 48 No. towel bars	96	No.	6.46	620	8.80	845	15.26	1,465
17.20 Medicine cabinet	24	No.	12.00	288	63.54	1,525	75.54	1,813
17.30 25 mm dia. chrome shower curtain rod.	24	No.	4.72	113	6.60	158	11.32	272
17.40 Mail box and house numbers (size .81 x .45 m) for 24 apts.	1	set	61.30	61	405.00	405	466.30	466
17.50 18 mm dia. chrome coat rods.	24	No.	3.95	95	5.50	132	9.45	227
17.60 Drapery tracks.	102	m	3.64	371	8.60	877	12.24	1,248

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

MEDICINE HAT

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
17.70 970 mm high metal railing c/w balusters 100 mm o.c. max. to balconies.	98	m	12.50	1,225	44.94	4,404	57.44	5,629
17.80 Metal balustrade to stairs c/w vinyl cap.	66	m	12.50	825	39.72	2,622	52.22	3,447
17.90 50 mm dia. pipe handrail and brackets.	54	m	25.50	1,377	45.65	2,465	71.15	3,842
SUBTOTAL - SPECIALTIES	9.91	/m2 GFA		4,976		13,433		18,409
18. APPLIANCES								
18.10 Freestanding range, 760 mm (30") top four surface elements, oven auto timer.	24	No.	18.00	432	539.00	12,936	557.00	13,368
18.20 Electric refrigerator, manual defrost .37 m3 (13 cu. ft.) capacity	24	No.	18.00	432	499.00	11,976	517.00	12,408
18.30 Range hood	24	No.	18.00	432	110.00	2,640	128.00	3,072
18.40 Coin operated dryer.	2	No.	18.00	36	625.00	1,250	643.00	1,286
18.50 Coin operated washer.	2	No.	18.00	36	815.00	1,630	833.00	1,666
SUBTOTAL - APPLIANCES	17.12	/m2 GFA		1,368		30,432		31,800

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

MEDICINE HAT

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
19. PLUMBING								
19.10 Complete plumbing including : -24 No. water closets -32 No. lavatory basins -24 No. baths (5') - 1 No. mop service basin - 1 No. laundry tub (The above Crane or equal) -24 No. kitchen sinks, compartment, stainless steel. - 1 No. water heater and storage tank, cap. 300 MBH - 1 No. domestic hot water recirculating pump and accessories. - rough-in, waste and vent - roof drains	24	apt.	654.00	15,696	2,050.00	49,200	2,704.00	64,896
SUBTOTAL - PLUMBING	34.95	/m2 GFA		15,696		49,200		64,896
20. HEATING								
20.10 Hot water circulation system (268 m total length) c/w radiators, 24 control valves, one centrifugal circulation pump, complete with all piping, 50 gallon expansion tank, hot water heating boiler and gas supply system.	24	apt.	442.00	10,608	890.00	21,360	1,332.00	31,968
SUBTOTAL - HEATING	17.21	/m2 GFA		10,608		21,360		31,968

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

MEDICINE HAT

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
21. VENTILATION								
21.10 Ventilation system, complete for 24-unit apartment building with all ductwork and fans.	24	apt.	92.00	2,208	269.00	6,456	361.00	8,664
SUBTOTAL - VENTILATION	4.67	/m2 GFA		2,208		6,456		8,664
22. FIRE PROTECTION								
22.10 Fire protection system, complete for 24-unit apartment building.	24	apt.	33.00	792	61.00	1,464	94.00	2,256
SUBTOTAL - FIRE PROTECTION	1.21	/m2 GFA		792		1,464		2,256
23. ELECTRICAL								
23.10 Complete electrical installation including fixture supply: fixtures, receptacles and connections for TV, phone and razor; vent fan, door-bell with two presses, 100 A service board and fire alarm system (includes for elect. fixtures.)	24	apt.	861.00	20,664	1,190.00	28,560	2,051.00	49,224
SUBTOTAL - ELECTRICAL	26.51	/m2 GFA		20,664		28,560		49,224

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

MEDICINE HAT CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
24. SITE OVERHEADS								
24.10 Site Overheads								
- setup								
- supervision								
- plant								
- site office								
- small tools								
- security								
- boarding, etc.	24	apt.	1,388.00	33,312	695.35	16,688	2,083.35	50,000
SUBTOTAL - SITE OVERHEADS	26.93	/m2 GFA		33,312		16,688		50,000
25. GENERAL CONTRACTOR'S OVERHEADS & PROFIT								
25.10 General Contractor's Overhead & Profit								
- permits								
- bonds								
- insurance								
- office overhead								
- profit	24	apt.	735.00	17,640	364.00	8,736	1,099.00	26,376
SUBTOTAL - GEN.CONTRACTOR'S OH.& PROFIT	14.20	/m2 GFA		17,640		8,736		26,376
TOTAL - MEDICINE HAT	408.43	/m2 GFA		269,116		489,332		758,448

DETAILED COST ESTIMATES FOR LLOYDMINSTER

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LLOYDMINSTER

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
1. EXCAVATION									
1.10	Excavate for basement, wall footings, and bases.	891	m3	0.43	383	1.58	1,408	2.01	1,791
1.20	Backfill to basement walls, footings, and bases.	188	m3	0.39	73	1.40	263	1.79	337
1.30	150 mm gravel or sand bed under slab on grade.	70	m3	3.15	221	10.60	742	13.75	963
1.40	.152 mm polyethylene vapour barrier on gravel or sand bed.	501	m2	0.89	446	0.30	150	1.19	596
	SUBTOTAL - EXCAVATION	1.98	/m2 GFA		1,123		2,563		3,686
2. CONCRETE									
2.10	25 MPa concrete in footings and basement walls (material only) 200 mm reinforced concrete wall, 250 x 560 mm reinforced concrete footing.	58	m3	0.00	0	120.16	6,969	120.16	6,969
2.20	Reinforcing steel in footings and basement walls (material only).	1,652	kg	0.00	0	0.75	1,239	0.75	1,239
2.30	Form, place rebar and pour concrete in footing (560 x 250 mm) -subcontract	222	m	5.73	1,272	2.03	451	7.76	1,723

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LLOYDMINSTER

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
2.35	Form, place rebar, and pour concrete in basement wall (1.2 m high) (subcontract)	96	m	15.64	1,501	6.33	608	21.97	2,109
2.40	90 mm concrete (20 MPa) in slab on grade.	456	m2	3.24	1,477	9.02	4,113	12.26	5,591
2.45	150 x 150 mm welded wire mesh reinforcement to slab on grade (material only).	456	m2	0.00	0	3.07	1,400	3.07	1,400
2.55	38 mm thick rigid insulation to concrete wall (basement).	117	m2	2.09	245	4.33	507	6.42	751
2.60	Parging to concrete walls.	29	m2	8.90	258	3.68	107	12.58	365
	SUBTOTAL - CONCRETE	10.85	/m2 GFA		4,754		15,393		20,147
3.	DAMPROOFING								
3.10	Two coats asphaltic emulsion on concrete walls.	159	m2	0.29	46	0.29	46	0.58	92
3.20	100 mm perforated plastic weeping tile in crushed gravel surround.	96	m	3.60	346	4.64	445	8.24	791
	SUBTOTAL - DAMPROOFING	0.48	/m2 GFA		392		492		884
4.	SIDING								
4.10	Prefinished aluminum siding	98	m2	5.88	576	14.43	1,414	20.31	1,990

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LLOYDMINSTER

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
4.40	Stained dark-brown cedar siding 25 x 150 mm channel to column.	700	FBM	0.75	525	1.21	847	1.96	1,372
4.50	Stucco on wire mesh incl. building paper.	678	m2	13.54	9,180	6.98	4,732	20.52	13,913
4.60	24 ga. aluminum vented metal soffit c/w edge moulding.	59	m2	5.96	352	12.64	746	18.60	1,097
	SUBTOTAL - SIDING	9.89	/m2 GFA		10,633		7,739		18,372
5.	ROOFING/SHEET METAL								
5.10	Built-up asphalt roofing completed with mineral granular and flashing.	527	m2	21.20	11,172	21.05	11,093	42.25	22,266
5.30	R.S.I. 6 (R34) batt insulation in joist space.	527	m2	1.62	854	8.70	4,585	10.32	5,439
5.40	.102 mm polyethylene vapour barrier.	580	m2	0.26	151	0.24	139	0.50	290
5.50	Prefinished flashing over window.	66	m	1.83	121	3.86	255	5.69	376
	SUBTOTAL - ROOFING/SHEET METAL	15.28	/m2 GFA		12,298		16,072		28,370

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LLOYDMINSTER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6. CARPENTRY (ROUGH)								
6.10 Material Only No. 2 grade fir or spruce as below floor joists (38 x 235 mm) - fir built-up beam (3-38 x 235 mm) - fir built-up beam (2-38 x 235 mm) - fir roof joist (38 x 235 mm) - spruce	38.0	MFBM	0.00	0	771.23	29,307	771.23	29,307
6.20 Material Only No. 2 grade fir or spruce as below framing (38 x140 mm) - fir plate (38 x 140 mm) - fir cross bridging (38 x 38 mm) - spruce framing (38 x 89 mm) - spruce framing (38 x 140 mm) - spruce blocking (38 x 89 mm) - spruce blocking (38 x 140 mm) - spruce wall strapping (38 x 38 mm) - spruce fascia (19 x 140 mm) - spruce	44.0	MFBM	0.00	0	578.90	25,472	578.90	25,472
6.30 Material Only - Sheathing 19 mm plywood (floor underlay) 1432 m2 13 mm tentest (u/s of joist) 1368 m2 10 mm plywood (roof sheathing) 524 m2 13 mm plywood (wall sheathing - protection board 350mm high) 19 m2 8 mm plywood (wall sheathing) 727 m2	4,070	m2	0.00	0	9.12	37,118	9.12	37,118
6.40 Labour Only - complete framing including installation of windows.	1,857	m2	24.52	45,534	0.00	0	24.52	45,534

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LLOYDMINSTER

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6.50	90 x 238 mm wide R.S.I. 2.1 (R12) batt insulation (vertical eaves).	99	m	0.46	46	0.75	74	1.21	120
	SUBTOTAL - CARPENTRY (ROUGH)	74.07	/m2 GFA		45,579		91,971		137,550
7.	CARPENTRY (FINISH)								
7.10	Stair - 6 flights @ (2x6x8 = 96 risers) 38 x 300 mm stringers 59 m 38 x 235 mm treads 103 m 6 x 275 mm fir plywood in risers 115 m	2	No.	588.00	1,176	393.00	786	981.00	1,962
7.30	Select grade fir in window and door trim and base (40 x 12 mm) - window 431 m - door 555 m - base 2328 m	3,314	m	1.30	4,308	1.22	4,043	2.52	8,351
	SUBTOTAL - CARPENTRY (FINISH)	5.55	/m2 GFA		5,484		4,829		10,313
8.	WINDOWS AND GLAZING								
8.10	Double-glazed patio door in wood frame with aluminum cladding and including hardware (size 2.4 x 1.8 m).	18	No.	0.00	0	917.00	16,506	917.00	16,506
8.20	Double-glazed wired glass sealed window in steel frame (size 2.4 x2.55 m).	4	No.	0.00	0	878.00	3,512	878.00	3,512
8.30	Double-glazed sliding units in wood frame (size 2.4 x .9 m) including aluminum sliders, screen, and hardware.	6	No.	0.00	0	245.00	1,470	245.00	1,470

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LLOYDMINSTER CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
8.40	Double-glazed sliding units in wood frame (size 1.5 x .9 m) including aluminum sliders, screen, and hardware.	28	No.	0.00	0	165.00	4,620	165.00	4,620
8.50	Double-glazed sliding units in wood frame (size .9 x .9 m) including aluminum sliders, screen, and hardware.	3	No.	0.00	0	135.00	405	135.00	405
	SUBTOTAL - WINDOWS AND GLAZING	14.28	/m2 GFA		0		26,513		26,513
9.	SEALANTS								
9.10	Caulk (exterior) (exterior doors, windows, junction of siding and concrete).	725	m	0.41	297	0.28	203	0.69	500
9.20	Caulk (interior) - ceramic tile	227	m	1.08	245	0.58	132	1.66	377
	SUBTOTAL - SEALANTS	0.47	/m2 GFA		542		335		877
10.	Doors								
10.03	Exterior - Aluminum entrance and sidelight, (size 2.4 x 2.1 m overall) including .9 x 2.1 m aluminum glazed door c/w door closer, push and pull, lock and aluminum threshold.	3	No	254.00	762	1,745.00	5,235	1,999.00	5,997

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LLOYDMINSTER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
10.06 Fire rated door and sidelight with 0.9 x 2.1 m, 20 min. label wood door and pressed steel frame including hardware and 6 mm wire glass to sidelight - 4 No. 1.9 x 2.1 m - 4 No. 1.4 x 2.1 m	8	No.	196.00	1,568	1,229.00	9,832	1,425.00	11,400
10.09 Solid core door and frame, rotary cut mahogany - 24 No. .9x2.1mx44mm (20 min. label) - 26 No. .85 x 2.1m x 44mm	50	No.	23.00	1,150	201.00	10,050	224.00	11,200
10.10 Solid core door and frame, rotary cut mahogany - 1 No. .9x2.1mx44mm (45 min. label)	1	No.	23.00	23	249.00	249	272.00	272
10.20 Hollow core door and frame, rotary cut mahogany face - 24 No. .70 x 2.0 m x 35mm - 24 No. .75 x 2.0 m x 35mm	48	No.	12.75	612	45.95	2,206	58.70	2,818
10.25 Metal door labelled (1 hour) c/w fire rated pressed steel frame - 1 No. .9 x 2.1 m x 45 mm	1	No.	23.00	23	226.00	226	249.00	249

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LLOYDMINSTER CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
10.30 Metal folding bi-fold doors, with tracks and pulls - 28 No. 1.8 x 2.0 m - 14 No. 1.5 x 2.0 m - 6 No. 1.2 x 2.0 m - 14 No. 0.9 x 2.0 m - 16 No. 0.6 x 2.0 m	78	No.	12.75	995	132.00	10,296	144.75	11,291
SUBTOTAL - DOORS	23.28	/m2 GFA		5,133		38,094		43,227
11. HARDWARE								
11.15 Lock sets to interior doors.	25	set	12.00	300	24.05	601	36.05	901
11.25 Butts to interior doors. (included with frames)	129	pair	0.00	0	0.00	0	0.00	0
11.30 Latch sets.	81	set	8.25	668	12.99	1,052	21.24	1,720
11.40 Bathroom privacy latch sets.	24	set	8.25	198	14.99	360	23.24	558
11.50 Door closers (rated).	14	No.	13.75	193	29.00	406	42.75	599
SUBTOTAL - HARDWARE	2.03	/m2 GFA		1,359		2,419		3,778
12. CERAMIC TILING								
12.10 Ceramic tile 100 x 100 x 6 mm thinset on drywall.	137	m2	30.00	4,110	24.37	3,339	54.37	7,449
SUBTOTAL - CERAMIC TILING	4.01	/m2 GFA		4,110		3,339		7,449

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LLOYDMINSTER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13. WALLBOARD								
13.10 Gypsum wallboard (13mm standard) on walls, taped and sanded.	3,906	m2	3.44	13,437	2.40	9,374	5.84	22,811
13.13 Gypsum wallboard (13mm fire rated) taped and sanded. - walls 705 m2 - stair soffit 29 m2	734	m2	3.80	2,789	2.86	2,099	6.66	4,888
13.14 Gypsum wallboard (15.9 mm thick), taped and sanded.	487	m2	3.80	1,851	3.47	1,690	7.27	3,540
13.15 Gypsum wallboard (15.9mm fire rated) to shaft enclosure, taped and sanded.	63	m2	5.86	369	3.68	232	9.54	601
13.16 Gypsum wallboard (15.9mm fire rated with sound barrier) on ceiling, taped and sanded.	1,887	m2	4.82	9,095	4.05	7,642	8.87	16,738
13.17 2 layers gypsum wallboard (15.9mm fire rated with sound barrier) on ceiling,taped and sanded.	4	m2	7.83	31	8.00	32	15.83	63
13.30 Tentest board, Crane 3-183 Redcliffe	524	m2	4.32	2,264	3.47	1,818	7.79	4,082
13.40 Finish to ceilings - textured	1,425	m2	1.37	1,952	1.17	1,667	2.54	3,620

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LLOYDMINSTER CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13.70 .102 mm polyethylene vapour barrier.	1,346	m2	0.26	350	0.24	323	0.50	673
13.83 Batt insulation RSI - 3.5 (R20) to exterior walls.	728	m2	0.80	582	4.49	3,269	5.29	3,851
13.86 Batt insulation RSI - 3.5 (R20) to interior walls.	908	m2	0.80	726	4.49	4,077	5.29	4,803
SUBTOTAL - WALLBOARD	35.36	/m2 GFA		33,447		32,224		65,671
14. FLOORING								
14.10 Sheet vinyl flooring (.065 gauge) with adhesive to subfloor.	364	m2	6.04	2,199	11.65	4,241	17.69	6,439
14.20 20 oz, 100% Nylon carpet c/w 13 mm thick chip foam underlay.	1,296	m2	3.60	4,666	14.70	19,051	18.30	23,717
14.30 'Neoprene Hypalon' waterproofing or equal to balcony.	67	m2	19.46	1,304	24.06	1,612	43.52	2,916
14.40 Gypcrete floor topping including steel trowel finish.	1,338	m2	8.10	10,838	4.03	5,392	12.13	16,230
SUBTOTAL - FLOORING	26.55	/m2 GFA		19,006		30,296		49,302
15. PAINTING								
15.12 Exterior work - Prepare, prime, two coats enamel on fascia board to balconies and entrance canopy.	26	m2	4.43	115	1.22	32	5.65	147

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LLOYDMINSTER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
15.14 Prepare, prime, two coats enamel on metal handrail and balustrade.	783	m	1.51	1,182	0.92	720	2.43	1,903
15.22 Interior work - Prepare, one coat primer sealer, one coat latex or semigloss paint on gypsum wallboard - walls 4962 m2 - ceiling 234 m2	5,196	m2	2.24	11,639	0.69	3,585	2.93	15,224
15.30 Two coats urethane varnish on doors and frames.	105	No.	24.00	2,520	5.78	607	29.78	3,127
15.40 Prepare, prime, one coat semigloss on base, door and window trim.	2,328	m	0.80	1,862	0.19	442	0.99	2,305
15.50 Prepare, prime, one coat semigloss on shelving.	94	m2	2.36	222	0.46	43	2.82	265
SUBTOTAL - PAINTING	12.37	/m2 GFA		17,541		5,430		22,971
16. FITTINGS								
16.10 Shelving - Douglas fir plywood, lipped one edge (20 mm thick x .45 m)	107	m	3.42	366	6.21	664	9.63	1,030

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LLOYDMINSTER CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
16.20 Vanity and cabinets, plastic laminated top to lower cabinets and c/w drawers, shelves, etc.								
- lower vanity and cupboard	27	m						
- wall units	99	m						
- worktop unit	69	m						
	195	m	31.80	6,201	217.00	42,315	248.80	48,516
SUBTOTAL - FITTINGS	26.68	/m2 GFA		6,567		42,979		49,546
17. SPECIALTIES								
17.10 Washroom accessories								
- 24 No. toilet paperholders								
- 24 No. soap dishes								
- 48 No. towel bars	96	No.	5.75	552	8.80	845	14.55	1,397
17.20 Medicine cabinet	24	No.	11.50	276	58.95	1,415	70.45	1,691
17.30 25 mm dia. chrome shower curtain rod.	24	No.	6.25	150	6.49	156	12.74	306
17.40 Mail box and house numbers (size .81 x .45 m) for 24 apts.	1	set	59.75	60	405.00	405	464.75	465
17.50 18 mm dia. chrome coat rods.	24	No.	3.50	84	4.81	115	8.31	199
17.60 Drapery tracks.	102	m	3.61	368	8.84	902	12.45	1,270

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LLOYDMINSTER CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
17.70 970 mm high metal balustrade to balconies c/w balusters 100 mm o.c.	98	m	11.50	1,127	44.50	4,361	56.00	5,488
17.80 Metal balustrade to stairs c/w vinyl cap.	66	m	11.50	759	39.50	2,607	51.00	3,366
17.90 50 mm dia. pipe handrail and brackets.	54	m	24.75	1,337	45.50	2,457	70.25	3,794
SUBTOTAL - SPECIALTIES	9.68	/m2 GFA		4,712		13,262		17,974
18. APPLIANCES								
18.10 Freestanding range, 760 mm (30") top four surface elements, oven auto timer.	24	No.	16.75	402	527.00	12,648	543.75	13,050
18.20 Electric refrigerator, manual defrost .37 m3 (13 cu. ft.) capacity	24	No.	16.75	402	499.00	11,976	515.75	12,378
18.30 Range hood	24	No.	16.75	402	104.00	2,496	120.75	2,898
18.40 Coin operated dryer.	2	No.	16.75	34	625.00	1,250	641.75	1,284
18.50 Coin operated washer.	2	No.	16.75	34	815.00	1,630	831.75	1,664
SUBTOTAL - APPLIANCES	16.84	/m2 GFA		1,273		30,000		31,273

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LLOYDMINSTER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
19. PLUMBING								
19.10 Complete plumbing including : -24 No. water closets -32 No. lavatory basins -24 No. baths (5') - 1 No. mop service basin - 1 No. laundry tub (The above Crane or equal) -24 No. kitchen sinks, compartment, stainless steel. - 1 No. water heater and storage tank, cap. 300 MBH - 1 No. domestic hot water recirculating pump and accessories. - rough-in, waste and vent - roof drains	24	apt.	610.00	14,640	1,970.00	47,280	2,580.00	61,920
SUBTOTAL - PLUMBING	33.34	/m2 GFA		14,640		47,280		61,920
20. HEATING								
20.10 Hot water circulation system (268 m total length) c/w radiators, 24 control valves, one centrifugal circulation pump, complete with all piping, 50 gallon expansion tank, hot water heating boiler and gas supply system.	24	apt.	592.00	14,208	1,240.00	29,760	1,832.00	43,968
SUBTOTAL - HEATING	23.68	/m2 GFA		14,208		29,760		43,968

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LLOYDMINSTER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
21. VENTILATION								
21.10 Ventilation system, complete for 24-unit apartment building with all ductwork and fans.	24	apt.	96.00	2,304	288.00	6,912	384.00	9,216
SUBTOTAL - VENTILATION	4.96	/m2 GFA		2,304		6,912		9,216
22. FIRE PROTECTION								
22.10 Fire protection system, complete for 24-unit apartment building.	24	apt.	40.00	960	76.00	1,824	116.00	2,784
SUBTOTAL - FIRE PROTECTION	1.50	/m2 GFA		960		1,824		2,784
23. ELECTRICAL								
23.10 Complete electrical installation including fixture supply: fixtures, receptacles and connections for TV, phone and razor; vent fan, door-bell with two presses, 100 A service board and fire alarm system (includes for elect. fixtures.)	24	apt.	1,060.00	25,440	1,410.00	33,840	2,470.00	59,280
SUBTOTAL - ELECTRICAL	31.92	/m2 GFA		25,440		33,840		59,280

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

LLOYDMINSTER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
24. SITE OVERHEADS								
24.10 Site Overheads - setup - supervision - plant - site office - small tools - security - boarding, etc.	24	apt.	1,388.00	33,312	695.35	16,688	2,083.35	50,000
SUBTOTAL - SITE OVERHEADS	26.93	/m2 GFA		33,312		16,688		50,000
25. GENERAL CONTRACTOR'S OVERHEADS & PROFIT								
25.10 General Contractor's Overhead & Profit - permits - bonds - insurance - office overhead - profit	24	apt.	690.00	16,560	353.00	8,472	1,043.00	25,032
SUBTOTAL - GEN.CONTRACTOR'S OH.& PROFIT	13.48	/m2 GFA		16,560		8,472		25,032
TOTAL - LLOYDMINSTER	425.47	/m2 GFA		281,377		508,726		790,103

DETAILED COST ESTIMATES FOR PEACE RIVER

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

PEACE RIVER

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
1. EXCAVATION									
1.10	Excavate for basement, wall footings, and bases.	891	m3	0.62	552	1.04	927	1.66	1,479
1.20	Backfill to basement walls, footings, and bases.	188	m3	0.58	109	0.96	180	1.54	290
1.30	150 mm gravel or sand bed under slab on grade.	70	m3	3.30	231	11.92	834	15.22	1,065
1.40	.152 mm polyethylene vapour barrier on gravel or sand bed.	501	m2	0.98	491	0.31	155	1.29	646
	SUBTOTAL - EXCAVATION	1.87	/m2 GFA		1,383		2,097		3,480
2. CONCRETE									
2.10	25 MPa concrete in footings and basement walls (material only) 200 mm reinforced concrete wall, 250 x 560 mm reinforced concrete footing.	58	m3	0.00	0	116.72	6,770	116.72	6,770
2.20	Reinforcing steel in footings and basement walls (material only).	1,652	kg	0.00	0	0.78	1,289	0.78	1,289
2.30	Form, place rebar and pour concrete in footing (560 x 250 mm) -subcontract	222	m	6.53	1,450	2.95	655	9.48	2,105

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

PEACE RIVER

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
2.35	Form, place rebar, and pour concrete in basement wall (1.2 m high) (subcontract)	96	m	18.04	1,732	9.30	893	27.34	2,625
2.40	90 mm concrete (20 MPa) in slab on grade.	456	m2	4.04	1,842	9.51	4,337	13.55	6,179
2.45	150 x 150 mm welded wire mesh reinforcement to slab on grade (material only).	456	m2	0.00	0	3.34	1,523	3.34	1,523
2.55	38 mm thick rigid insulation to concrete wall (basement).	117	m2	2.37	277	4.88	571	7.25	848
2.60	Parging to concrete walls.	29	m2	9.48	275	4.32	125	13.80	400
	SUBTOTAL - CONCRETE	11.71	/m2 GFA		5,576		16,162		21,738
3.	DAMPROOFING								
3.10	Two coats asphaltic emulsion on concrete walls.	159	m2	0.38	60	0.38	60	0.76	121
3.20	100 mm perforated plastic weeping tile in crushed gravel surround.	96	m	6.30	605	4.48	430	10.78	1,035
	SUBTOTAL - DAMPROOFING	0.62	/m2 GFA		665		491		1,156
4.	SIDING								
4.10	Prefinished aluminum siding	98	m2	6.80	666	15.16	1,486	21.96	2,152

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

PEACE RIVER

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
4.40	Stained dark-brown cedar siding 25 x 150 mm channel to column.	700	FBM	0.79	553	1.16	812	1.95	1,365
4.50	Stucco on wire mesh incl. building paper.	678	m2	14.61	9,906	7.13	4,834	21.74	14,740
4.60	24 ga. aluminum vented metal soffit c/w edge moulding.	59	m2	6.43	379	11.89	702	18.32	1,081
	SUBTOTAL - SIDING	10.41	/m2 GFA		11,504		7,833		19,337
5.	ROOFING/SHEET METAL								
5.10	Built-up asphalt roofing completed with mineral granular and flashing.	527	m2	23.51	12,390	19.80	10,435	43.31	22,824
5.30	R.S.I. 6 (R34) batt insulation in joist space.	527	m2	1.86	980	7.70	4,058	9.56	5,038
5.40	.102 mm polyethylene vapour barrier.	580	m2	0.36	209	0.24	139	0.60	348
5.50	Prefinished flashing over window.	66	m	2.01	133	3.48	230	5.49	362
	SUBTOTAL - ROOFING/SHEET METAL	15.39	/m2 GFA		13,711		14,861		28,572

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

PEACE RIVER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6. CARPENTRY (ROUGH)								
6.10 Material Only No. 2 grade fir or spruce as below floor joists (38 x 235 mm) - fir built-up beam (3-38 x 235 mm) - fir built-up beam (2-38 x 235 mm) - fir roof joist (38 x 235 mm) - spruce	38.0	MFBM	0.00	0	798.00	30,324	798.00	30,324
6.20 Material Only No. 2 grade fir or spruce as below framing (38 x140 mm) - fir plate (38 x 140 mm) - fir cross bridging (38 x 38 mm) - spruce framing (38 x 89 mm) - spruce framing (38 x 140 mm) - spruce blocking (38 x 89 mm) - spruce blocking (38 x 140 mm) - spruce wall strapping (38 x 38 mm) - spruce fascia (19 x 140 mm) - spruce	44.0	MFBM	0.00	0	599.00	26,356	599.00	26,356
6.30 Material Only - Sheathing 19 mm plywood (floor underlay) 1432 m2 13 mm tentest (u/s of joist) 1368 m2 10 mm plywood (roof sheathing) 524 m2 13 mm plywood (wall sheathing - protection board 350mm high) 19 m2 8 mm plywood (wall sheathing) 727 m2	4,070	m2	0.00	0	9.95	40,497	9.95	40,497
6.40 Labour Only - complete framing including installation of windows.	1,857	m2	30.26	56,193	0.00	0	30.26	56,193

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

PEACE RIVER

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
6.50	90 x 238 mm wide R.S.I. 2.1 (R12) batt insulation (vertical eaves).	99	m	0.47	47	0.71	70	1.18	117
	SUBTOTAL - CARPENTRY (ROUGH)	82.65	/m2 GFA		56,239		97,247		153,486
7.	CARPENTRY (FINISH)								
7.10	Stair - 6 flights @ (2x6x8 = 96 risers) 38 x 300 mm stringers 59 m 38 x 235 mm treads 103 m 6 x 275 mm fir plywood in risers 115 m	2	No.	540.00	1,080	470.00	940	1,010.00	2,020
7.30	Select grade fir in window and door trim and base (40 x 12 mm) - window 431 m - door 555 m - base 2328 m	3,314	m	1.60	5,302	1.23	4,076	2.83	9,379
	SUBTOTAL - CARPENTRY (FINISH)	6.14	/m2 GFA		6,382		5,016		11,399
8.	WINDOWS AND GLAZING								
8.10	Double-glazed patio door in wood frame with aluminum cladding and including hardware (size 2.4 x 1.8 m).	18	No.	0.00	0	987.00	17,766	987.00	17,766
8.20	Double-glazed wired glass sealed window in steel frame (size 2.4 x2.55 m).	4	No.	0.00	0	965.00	3,860	965.00	3,860
8.30	Double-glazed sliding units in wood frame (size 2.4 x .9 m) including aluminum sliders, screen, and hardware.	6	No.	0.00	0	276.00	1,656	276.00	1,656

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

PEACE RIVER

CONSTRUCTION COST ESTIMATE

		Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
8.40	Double-glazed sliding units in wood frame (size 1.5 x .9 m) including aluminum sliders, screen, and hardware.	28	No.	0.00	0	185.00	5,180	185.00	5,180
8.50	Double-glazed sliding units in wood frame (size .9 x .9 m) including aluminum sliders, screen, and hardware.	3	No.	0.00	0	151.00	453	151.00	453
	SUBTOTAL - WINDOWS AND GLAZING	15.57	/m2 GFA		0		28,915		28,915
9.	SEALANTS								
9.10	Caulk (exterior) (exterior doors, windows, junction of siding and concrete).	725	m	0.42	305	0.29	210	0.71	515
9.20	Caulk (interior) - ceramic tile	227	m	1.16	263	0.61	138	1.77	402
	SUBTOTAL - SEALANTS	0.49	/m2 GFA		568		349		917
10.	Doors								
10.03	Exterior - Aluminum entrance and sidelight, (size 2.4 x 2.1 m overall) including .9 x 2.1 m aluminum glazed door c/w door closer, push and pull, lock and aluminum threshold.	3	No	273.00	819	1,830.00	5,490	2,103.00	6,309

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

PEACE RIVER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
10.06 Fire rated door and sidelight with 0.9 x 2.1 m, 20 min. label wood door and pressed steel frame including hardware and 6 mm wire glass to sidelight - 4 No. 1.9 x 2.1 m - 4 No. 1.4 x 2.1 m	8	No.	208.00	1,664	1,278.00	10,224	1,486.00	11,888
10.09 Solid core door and frame, rotary cut mahogany - 24 No. .9x2.1mx44mm (20 min. label) - 26 No. .85 x 2.1m x 44mm	50	No.	27.00	1,350	218.00	10,900	245.00	12,250
10.10 Solid core door and frame, rotary cut mahogany - 1 No. .9x2.1mx44mm (45 min. label)	1	No.	27.00	27	270.00	270	297.00	297
10.20 Hollow core door and frame, rotary cut mahogany face - 24 No. .70 x 2.0 m x 35mm - 24 No. .75 x 2.0 m x 35mm	48	No.	15.00	720	46.95	2,254	61.95	2,974
10.25 Metal door labelled (1 hour) c/w fire rated pressed steel frame - 1 No. .9 x 2.1 m x 45 mm	1	No.	27.00	27	238.00	238	265.00	265

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

PEACE RIVER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
10.30 Metal folding bi-fold doors, with tracks and pulls - 28 No. 1.8 x 2.0 m - 14 No. 1.5 x 2.0 m - 6 No. 1.2 x 2.0 m - 14 No. 0.9 x 2.0 m - 16 No. 0.6 x 2.0 m	78	No.	14.60	1,139	148.00	11,544	162.60	12,683
SUBTOTAL - DOORS	25.13	/m2 GFA		5,746		40,920		46,666
11. HARDWARE								
11.15 Lock sets to interior doors.	25	set	13.50	338	27.02	676	40.52	1,013
11.25 Butts to interior doors. (included with frames)	129	pair	0.00	0	0.00	0	0.00	0
11.30 Latch sets.	81	set	8.75	709	13.25	1,073	22.00	1,782
11.40 Bathroom privacy latch sets.	24	set	8.75	210	15.29	367	24.04	577
11.50 Door closers (rated).	14	No.	15.60	218	28.87	404	44.47	623
SUBTOTAL - HARDWARE	2.15	/m2 GFA		1,475		2,520		3,995
12. CERAMIC TILING								
12.10 Ceramic tile 100 x 100 x 6 mm thinset on drywall.	137	m2	29.20	4,000	20.21	2,769	49.41	6,769
SUBTOTAL - CERAMIC TILING	3.65	/m2 GFA		4,000		2,769		6,769

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

PEACE RIVER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13. WALLBOARD								
13.10 Gypsum wallboard (13mm standard) on walls, taped and sanded.	3,906	m2	2.97	11,601	2.41	9,413	5.38	21,014
13.13 Gypsum wallboard (13mm fire rated) taped and sanded. - walls 705 m2 - stair soffit 29 m2	734	m2	3.21	2,356	2.93	2,151	6.14	4,507
13.14 Gypsum wallboard (15.9 mm thick), taped and sanded.	487	m2	3.21	1,563	3.60	1,753	6.81	3,316
13.15 Gypsum wallboard (15.9mm fire rated) to shaft enclosure, taped and sanded.	63	m2	5.62	354	3.80	239	9.42	593
13.16 Gypsum wallboard (15.9mm fire rated with sound barrier) on ceiling, taped and sanded.	1,887	m2	4.37	8,246	4.12	7,774	8.49	16,021
13.17 2 layers gypsum wallboard (15.9mm fire rated with sound barrier) on ceiling,taped and sanded.	4	m2	6.72	27	8.35	33	15.07	60
13.30 Tentest board, Crane 3-183 Redcliffe	524	m2	4.70	2,463	3.25	1,703	7.95	4,166
13.40 Finish to ceilings - textured	1,425	m2	1.44	2,052	1.28	1,824	2.72	3,876

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

PEACE RIVER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
13.70 .102 mm polyethylene vapour barrier.	1,346	m2	0.35	471	0.25	337	0.60	808
13.83 Batt insulation RSI - 3.5 (R20) to exterior walls.	728	m2	0.92	670	4.20	3,058	5.12	3,727
13.86 Batt insulation RSI - 3.5 (R20) to interior walls.	908	m2	0.92	835	4.20	3,814	5.12	4,649
SUBTOTAL - WALLBOARD	33.78	/m2 GFA		30,638		32,099		62,737
14. FLOORING								
14.10 Sheet vinyl flooring (.065 gauge) with adhesive to subfloor.	364	m2	6.47	2,355	12.42	4,521	18.89	6,876
14.20 20 oz, 100% Nylon carpet c/w 13 mm thick chip foam underlay.	1,296	m2	3.69	4,782	17.04	22,084	20.73	26,866
14.30 'Neoprene Hypalon' waterproofing or equal to balcony.	67	m2	17.36	1,163	22.74	1,524	40.10	2,687
14.40 Gypcrete floor topping including steel trowel finish.	1,338	m2	7.91	10,584	4.04	5,406	11.95	15,989
SUBTOTAL - FLOORING	28.23	/m2 GFA		18,884		33,534		52,418
15. PAINTING								
15.12 Exterior work - Prepare, prime, two coats enamel on fascia board to balconies and entrance canopy.	26	m2	5.28	137	1.31	34	6.59	171

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

PEACE RIVER CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
15.14 Prepare, prime, two coats enamel on metal handrail and balustrade.	783	m	1.42	1,112	0.99	775	2.41	1,887
15.22 Interior work - Prepare, one coat primer sealer, one coat latex or semigloss paint on gypsum wallboard - walls 4962 m2 - ceiling 234 m2	5,196	m2	2.25	11,691	0.72	3,741	2.97	15,432
15.30 Two coats urethane varnish on doors and frames.	105	No.	27.00	2,835	6.32	664	33.32	3,499
15.40 Prepare, prime, one coat semigloss on base, door and window trim.	2,328	m	0.70	1,630	0.23	535	0.93	2,165
15.50 Prepare, prime, one coat semigloss on shelving.	94	m2	2.10	197	0.38	36	2.48	233
SUBTOTAL - PAINTING	12.59	/m2 GFA		17,602		5,785		23,387
16. FITTINGS								
16.10 Shelving - Douglas fir plywood, lipped one edge (20 mm thick x .45 m)	107	m	3.92	419	6.30	674	10.22	1,094

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

PEACE RIVER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
16.20 Vanity and cabinets, plastic laminated top to lower cabinets and c/w drawers, shelves, etc.								
- lower vanity and cupboard	27	m						
- wall units	99	m						
- worktop unit	69	m						
	195	m	37.00	7,215	247.00	48,165	284.00	55,380
SUBTOTAL - FITTINGS	30.41	/m2 GFA		7,634		48,839		56,473
17. SPECIALTIES								
17.10 Washroom accessories - 24 No. toilet paperholders - 24 No. soap dishes - 48 No. towel bars	96	No.	6.33	608	9.60	922	15.93	1,529
17.20 Medicine cabinet	24	No.	12.30	295	64.05	1,537	76.35	1,832
17.30 25 mm dia. chrome shower curtain rod.	24	No.	6.70	161	7.06	169	13.76	330
17.40 Mail box and house numbers (size .81 x .45 m) for 24 apts.	1	set	64.00	64	410.00	410	474.00	474
17.50 18 mm dia. chrome coat rods.	24	No.	4.15	100	5.98	144	10.13	243
17.60 Drapery tracks.	102	m	4.15	423	9.74	993	13.89	1,417

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

PEACE RIVER CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
17.70 970 mm high metal railing c/w balusters 100 mm o.c. max. to balconies.	98	m	11.97	1,173	48.22	4,726	60.19	5,899
17.80 Metal balustrade to stairs c/w vinyl cap.	66	m	11.97	790	42.60	2,812	54.57	3,602
17.90 50 mm dia. pipe handrail and brackets.	54	m	27.29	1,474	49.24	2,659	76.53	4,133
SUBTOTAL - SPECIALTIES	10.48	/m2 GFA		5,087		14,371		19,458
18. APPLIANCES								
18.10 Freestanding range, 760 mm (30") top four surface elements, oven auto timer.	24	No.	20.00	480	556.00	13,344	576.00	13,824
18.20 Electric refrigerator, manual defrost .37 m3 (13 cu. ft.) capacity	24	No.	20.00	480	541.00	12,984	561.00	13,464
18.30 Range hood	24	No.	20.00	480	112.00	2,688	132.00	3,168
18.40 Coin operated dryer.	2	No.	20.00	40	647.00	1,294	667.00	1,334
18.50 Coin operated washer.	2	No.	20.00	40	852.00	1,704	872.00	1,744
SUBTOTAL - APPLIANCES	18.06	/m2 GFA		1,520		32,014		33,534

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

PEACE RIVER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
19. PLUMBING								
19.10 Complete plumbing including : -24 No. water closets -32 No. lavatory basins -24 No. baths (5') - 1 No. mop service basin - 1 No. laundry tub (The above Crane or equal) -24 No. kitchen sinks, compartment, stainless steel. - 1 No. water heater and storage tank, cap. 300 MBH - 1 No. domestic hot water recirculating pump and accessories. - rough-in, waste and vent - roof drains	24	apt.	953.00	22,872	2,206.00	52,944	3,159.00	75,816
SUBTOTAL - PLUMBING	40.83	/m2 GFA		22,872		52,944		75,816
20. HEATING								
20.10 Hot water circulation system (268 m total length) c/w radiators, 24 control valves, one centrifugal circulation pump, complete with all piping, 50 gallon expansion tank, hot water heating boiler and gas supply system.	24	apt.	540.00	12,960	1,248.00	29,952	1,788.00	42,912
SUBTOTAL - HEATING	23.11	/m2 GFA		12,960		29,952		42,912

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

PEACE RIVER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
21. VENTILATION								
21.10 Ventilation system, complete for 24-unit apartment building with all ductwork and fans.	24	apt.	96.00	2,304	296.00	7,104	392.00	9,408
SUBTOTAL - VENTILATION	5.07	/m2 GFA		2,304		7,104		9,408
22. FIRE PROTECTION								
22.10 Fire protection system, complete for 24-unit apartment building.	24	apt.	37.00	888	79.00	1,896	116.00	2,784
SUBTOTAL - FIRE PROTECTION	1.50	/m2 GFA		888		1,896		2,784
23. ELECTRICAL								
23.10 Complete electrical installation including fixture supply: fixtures, receptacles and connections for TV, phone and razor; vent fan, door-bell with two presses, 100 A service board and fire alarm system (includes for elect. fixtures.)	24	apt.	970.00	23,280	1,372.00	32,928	2,342.00	56,208
SUBTOTAL - ELECTRICAL	30.27	/m2 GFA		23,280		32,928		56,208

1988 ALBERTA HOUSE COST COMPARISON STUDY SEPTEMBER 1988

WALK - UP APARTMENT

GROSS FLOOR AREA : 1857 m2

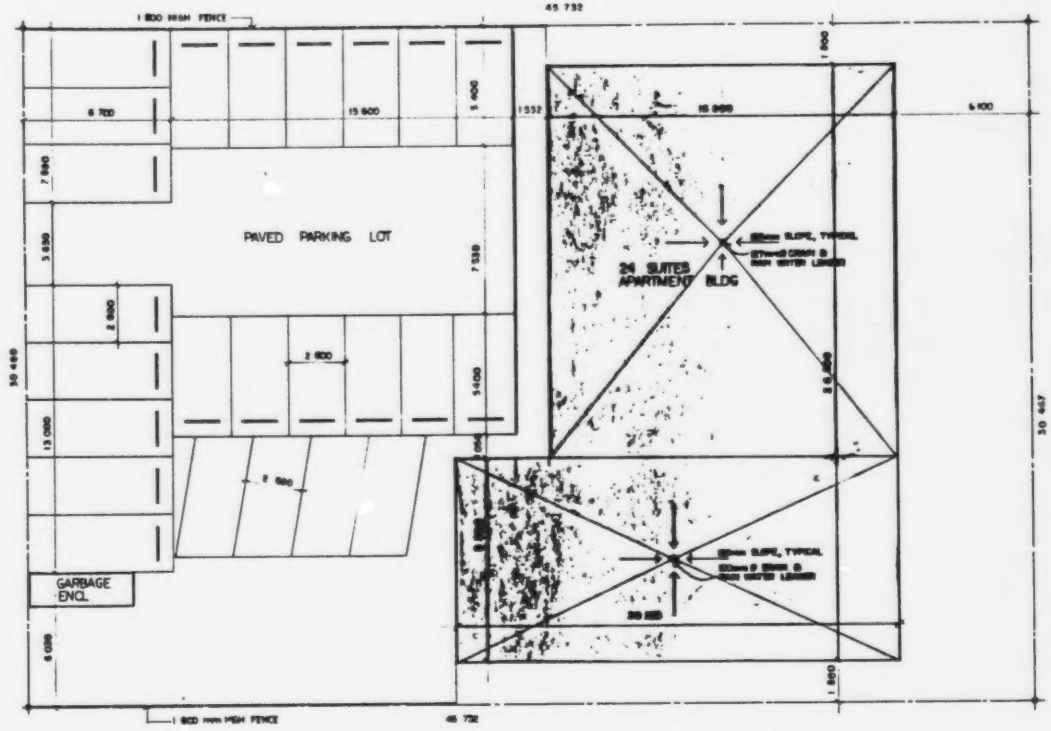
PEACE RIVER

CONSTRUCTION COST ESTIMATE

	Quantity	Unit	Labour Unit Rate	Labour Item Cost	Mat/Equip Unit Rate	Mat/Equip Item Cost	Total Unit Rate	Total Cost
24. SITE OVERHEADS								
24.10 Site Overheads								
- setup								
- supervision								
- plant								
- site office								
- small tools								
- security								
- boarding, etc.	24	apt.	1,388.00	33,312	695.35	16,688	2,083.35	50,000
SUBTOTAL - SITE OVERHEADS	26.93	/m2 GFA		33,312		16,688		50,000
25. GENERAL CONTRACTOR'S OVERHEADS & PROFIT								
25.10 General Contractor's Overhead & Profit								
- permits								
- bonds								
- insurance								
- office overhead								
- profit	24	apt.	705.00	16,920	360.00	8,640	1,065.00	25,560
SUBTOTAL - GEN.CONTRACTOR'S OH.& PROFIT	13.76	/m2 GFA		16,920		8,640		25,560
TOTAL - PEACE RIVER	450.79	/m2 GFA		301,150		535,974		837,124

APPENDIX

Reduced Drawings : Walk-Up Apartment



STATISTICS

SITE AREA	1990m²
SUITES	24 ONE BEDROOM
BUILDING AREA	465m²
PARKING	24 CARS

THE BUILDING IS REQUIRED TO FACE AT LEAST ONE STREET.

ACCESS WALL PANELS -OR- WINDOW SHALL BE PROVIDED ON SECOND AND THIRD FLOOR IN AT LEAST 1 WALL FACING ON A STREET.

SPACIAL SEPARATIONS BETWEEN BUILDINGS:

THE MAXIMUM PERCENTAGE OF UNPROTECTED OPENING, IN AN EXPOSED BUILDING FACE SHALL CONFORM TO THE REQUIREMENTS OUTLINED IN THE ALBERTA BUILDING CODE. (9.10.14.)

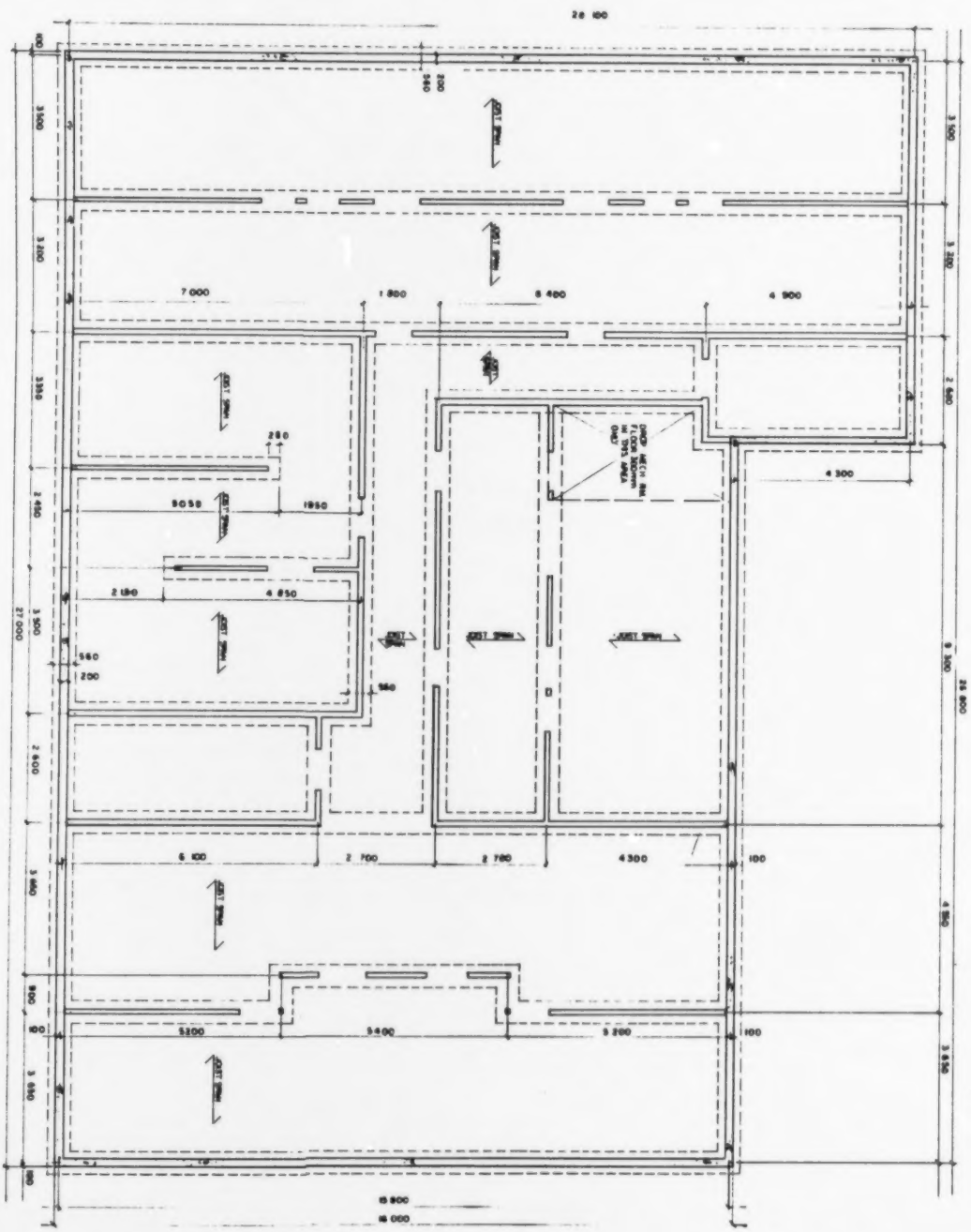
ONE SET OF EXAMINED DRAWINGS SHALL BE AVAILABLE CONTINUOUSLY AT THE CONSTRUCTION SITE DURING WORKING HOURS FOR INSPECTION BY THE AUTHORITY HAVING JURISDICTION.

ALBERTA HOUSE COST COMPARISON STUDY

SITE PLAN

SCALE 1:100

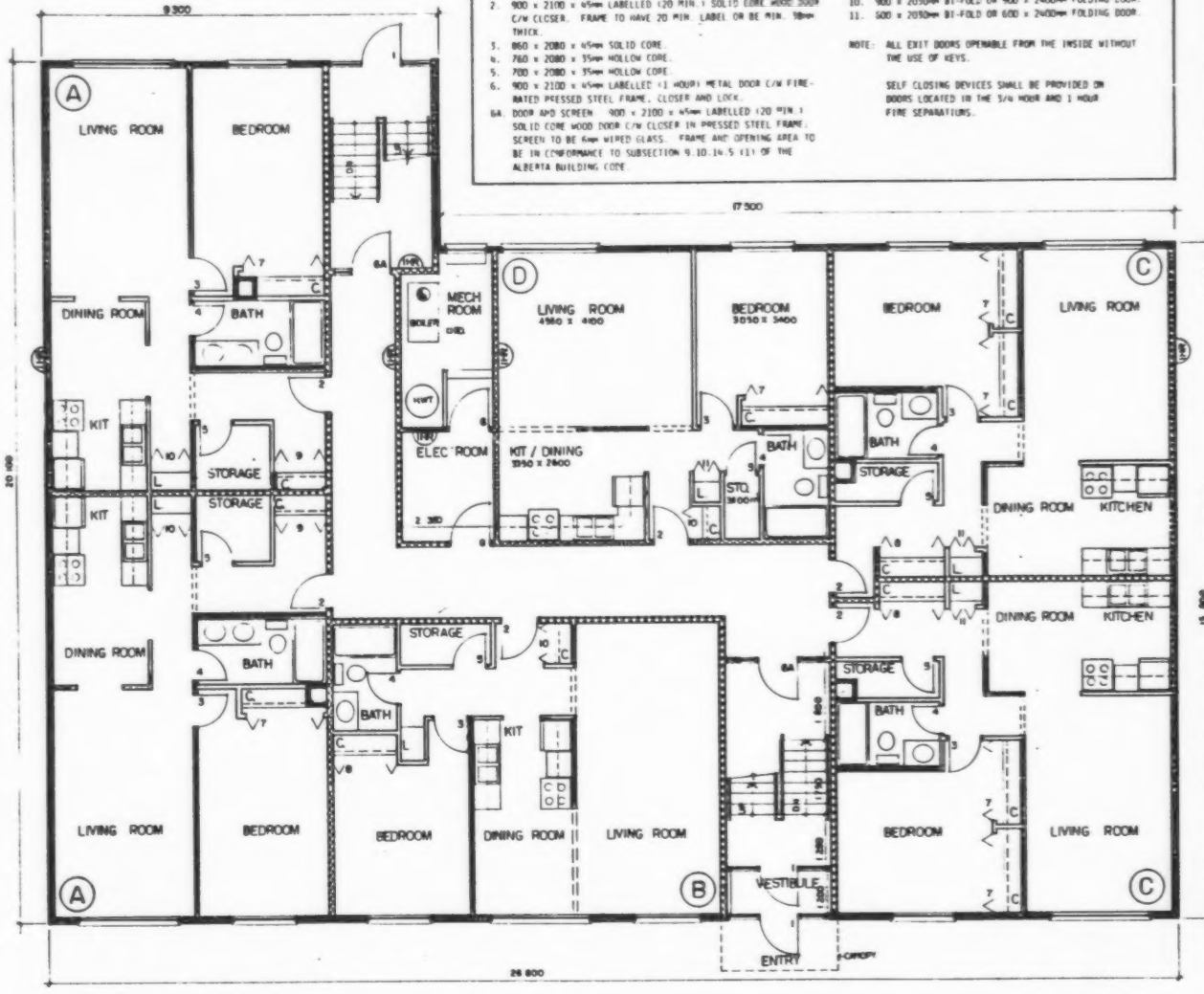
0 1 2 3 4 5 6 7 8 9 10m



ALBERTA HOUSE COST COMPARISON STUDY

FOUNDATION PLAN

SCALE 1:50



DOOR SCHEDULE

1. 900 x 2100mm ALUMINUM GLAZED DOOR C/W DOOR CLOSER, PUSH AND PULL, LOCK AND THRESHOLD. (NOTE - FROM INSIDE SHOULD NOT USE KEY TO OPEN)
2. 900 x 2100 x 45mm LABELLED (20 MIN.) SOLID CORE WOOD DOOR C/W CLOSER. FRAME TO HAVE 20 MIN. LABEL OR BE MIN. 38mm THICK.
3. 860 x 2080 x 45mm SOLID CORE.
4. 760 x 2080 x 35mm HOLLOW CORE.
5. 700 x 2080 x 35mm HOLLOW CORE.
6. 900 x 2100 x 45mm LABELLED (1 HOUR) METAL DOOR C/W FIRE-RATED PRESSED STEEL FRAME, CLOSER AND LOCK.

6A. DOOR AND SCREEN - 900 x 2100 x 45mm LABELLED (20 MIN.) SOLID CORE WOOD DOOR C/W CLOSER IN PRESSED STEEL FRAME. SCREEN TO BE 6mm WIRED GLASS. FRAME AND OPENING AREA TO BE IN CONFORMANCE TO SUBSECTION 9.10.14.5 (1) OF THE ALBERTA BUILDING CODE

7. 1800 x 2080mm BI-FOLD OR 1800 x 2400mm FOLDING DOOR.
8. 1500 x 2080mm BI-FOLD OR 1800 x 2400mm FOLDING DOOR.
9. 1200 x 2080mm BI-FOLD OR 1200 x 2400mm FOLDING DOOR.
10. 900 x 2030mm BI-FOLD OR 900 x 2400mm FOLDING DOOR.
11. 600 x 2030mm BI-FOLD OR 600 x 2400mm FOLDING DOOR.

NOTE: ALL EXIT DOORS OPENABLE FROM THE INSIDE WITHOUT THE USE OF KEYS.

SELF CLOSING DEVICES SHALL BE PROVIDED ON DOORS LOCATED IN THE 3/4 HOUR AND 1 HOUR FIRE SEPARATIONS.

WALL LEGEND

EXTERIOR STUD WALL C/W 38 x 38mm STRAPPING TO FOUNDATION WALL: SIDING OR STUCCO, BUILDING PAPER, 38 x 140mm STUDS @ 400mm O.C , RSI 3.5 MINERAL WOOL INSULATION, VAPOUR BARRIER, 12.7mm GYPSUM BOARD.

EXTERIOR STUD WALL: 1 HOUR FIRE RESISTANCE RATING, C/W 38 x 38mm STRAPPING TO FOUNDATION WALL, NON-COMBUSTIBLE SIDING OR STUCCO, BUILDING PAPER, 38 x 140mm STUDS @ 400mm O.C., RSI 3.5 MINERAL WOOL INSULATION WITH DENSITY OF 1.2kg/m³, VAPOUR BARRIER, 15.9mm TYPE X GYPSUM BOARD.

EXTERIOR STUD WALL: SIDING OR STUCCO, BUILDING PAPER, 38 x 89mm STUDS @ 400mm O.C., RSI 2.1 MINERAL WOOL INSULATION, VAPOUR BARRIER, 12.7mm GYPSUM BOARD.

EXTERIOR STUD WALL: 1 HOUR FIRE RESISTANCE RATING, NON-COMBUSTIBLE SIDING OR STUCCO, BUILDING PAPER, 38 x 89mm STUDS @ 400mm O.C., RSI 2.1 MINERAL WOOL INSULATION WITH DENSITY OF 1.2kg/m³, VAPOUR BARRIER, 15.9mm TYPE X GYPSUM BOARD.

INTERIOR WALL (3/4 HOUR FIRE SEPARATION) 2 ROWS OF 38 x 89mm STUDS, EACH SET 400mm O.C. STAGGERED ON COMMON 38 x 140mm PLATE, MINERAL FIBRE WITH A MASS OF AT LEAST 1.2kg/m² ON EACH SIDE. 12.7mm GYPSUM BOARD, BOTH SIDES.

INTERIOR WALL: 12.7mm GYPSUM BOARD BOTH SIDES OF 38 x 140mm STUDS.

INTERIOR WALL: (3/4 HOUR FIRE RESISTANCE RATING) 38 x 89mm STUDS @ 400mm O.C. (BASEMENT - 38 x 140mm STUDS) AND 12.7mm TYPE X GYPSUM BOARD, BOTH SIDES.

INTERIOR WALL: (1 HOUR FIRE SEPARATION) 2 ROWS OF 38 x 89mm STUDS, EACH SET 400mm O.C. STAGGERED ON COMMON 38 x 140mm PLATE, MINERAL FIBRE ON EACH SIDE, 15.9mm TYPE X GYPSUM BOARD, BOTH SIDES.

INTERIOR WALL: (1 HOUR FIRE SEPARATION) 38 x 140mm STUDS @ 400mm O.C. AND 15.9mm TYPE X GYPSUM BOARD BOTH SIDES.

INTERIOR WALL: 38 x 89mm STUDS AT 400mm O.C. AND 12.7mm GYPSUM BOARD, BOTH SIDES.

DROP BEAM

NOTES

- DOUBLE STUDS UNDER ALL BEARING POINTS AND ALL OPENINGS.
- LINTELS 2 - 38 x 295mm BUILT-UP LINTEL, HORIZONTALLY ABOVE ALL OPENINGS.
- BALCONY CANTILEVERED JOISTS SHALL EXTEND INTO BUILDING MINIMUM 2400mm.

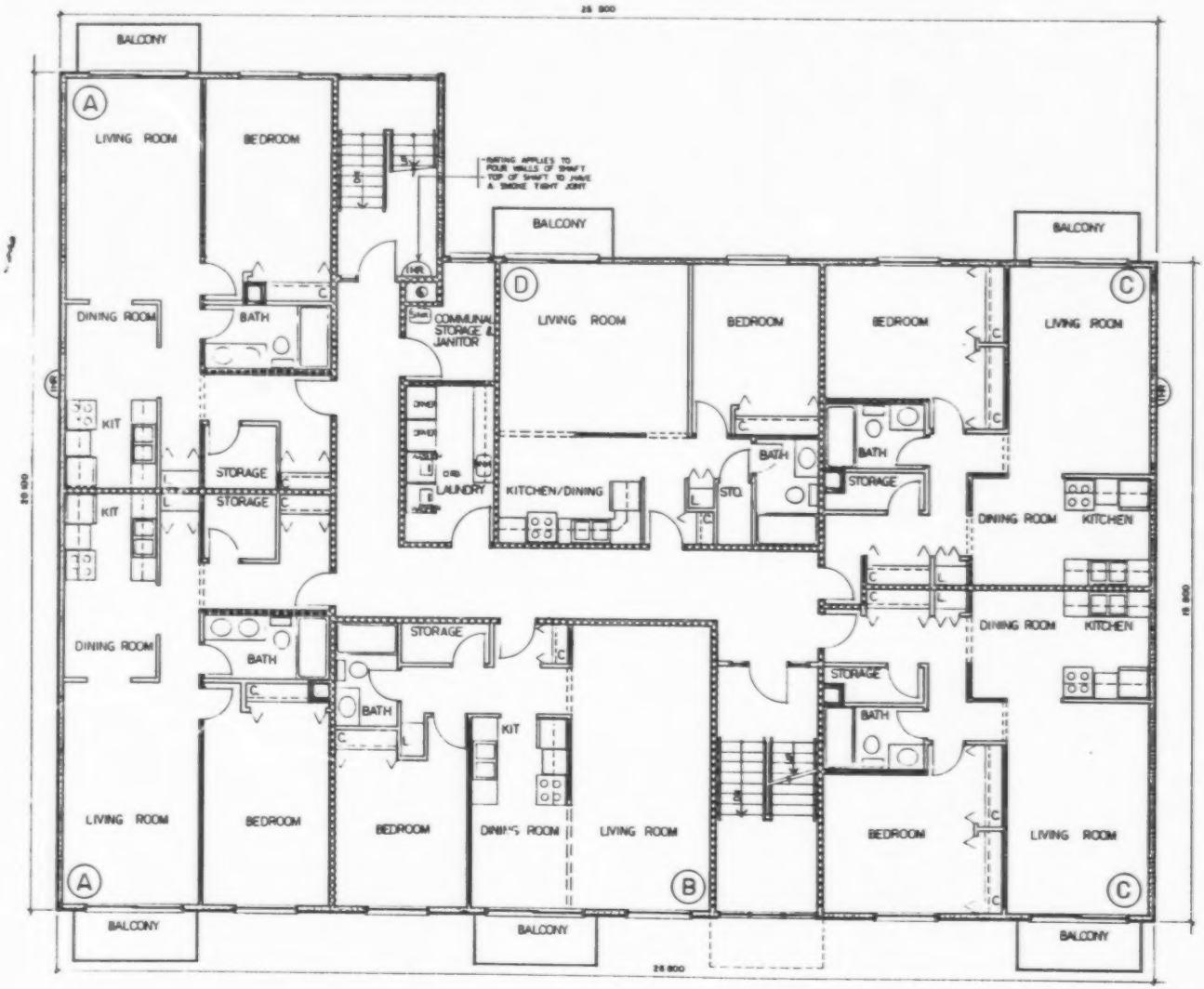
SHAFT ENCLOSURE: 3/4 FIRE RESISTANCE RATING AND STC OF 45, 15.9mm TYPE X GYPSUM BOARD, 57mm x .550mm THICK GALVANIZED STEEL I-STUDS AT 400mm O.C. AND J-TRACKS TOP AND BOTTOM, RESILIENT FURRING CHANNELS @ 600mm O.C., MINERAL WOOL INSULATION WITH DENSITY OF 1.2kg/m², 19mm GYPSUM CORE BOARD.

ALBERTA HOUSE COST COMPARISON STUDY

BASEMENT FLOOR PLAN

SCALE 1:50

0 .5 1 2 3 4 5 6m

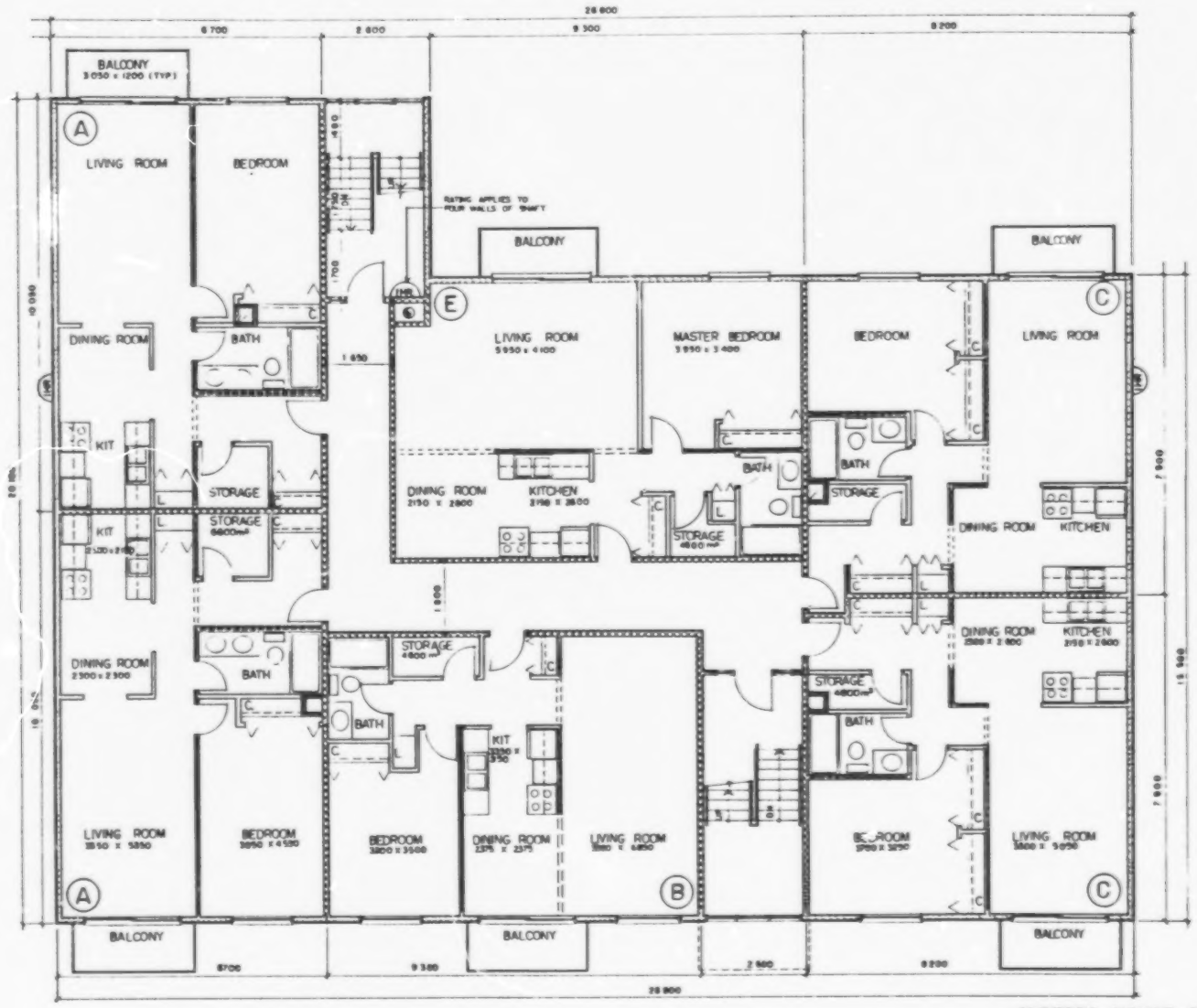


NOTE
SEE BASEMENT FLOOR PLAN FOR TYPICAL DOOR & BI-FOLD DOOR TYPES, SIZES & LOCATIONS

ALBERTA HOUSE COST COMPARISON STUDY

MAIN FLOOR PLAN

SCALE 1:100



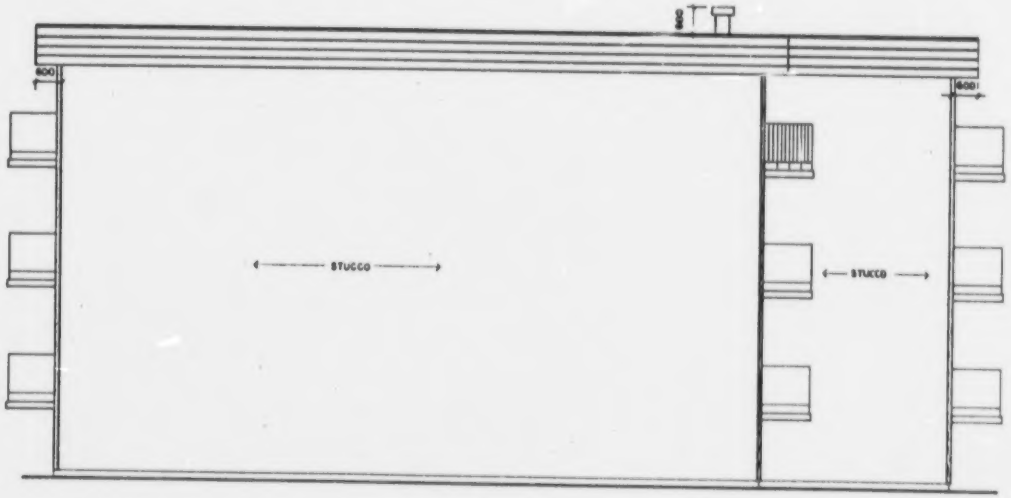
NOTE
SEE BASEMENT FLOOR PLAN FOR TYPICAL DOOR, BI-FOLD DOOR TYPES, SIZES & LOCATIONS

ALBERTA HOUSE COST COMPARISON STUDY

2ND & 3RD FLOOR PLAN

SCALE 1:50

FRONT ELEVATION

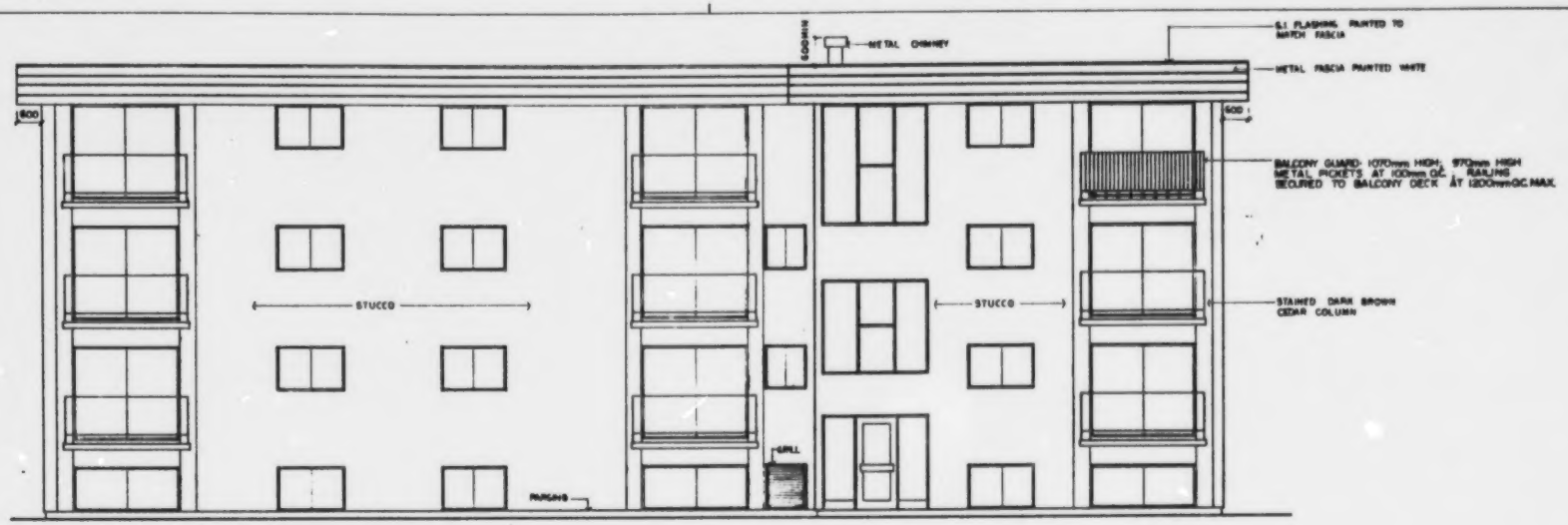


RIGHT ELEVATION

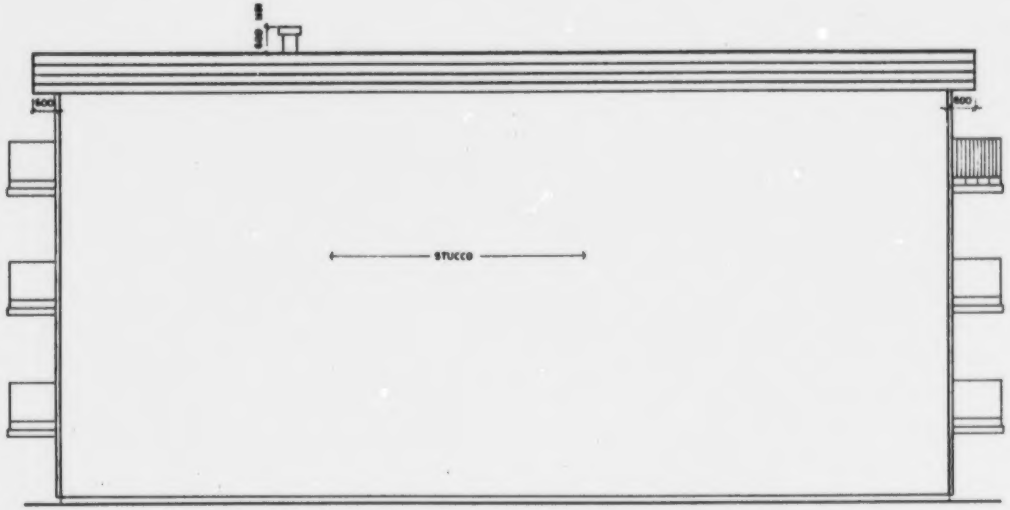
ALBERTA HOUSE COST COMPARISON STUDY

ELEVATIONS

SCALE 1:50


METAL CHIMNEY
S.I. FLASHING PAINTED TO MATCH FASCIA
METAL FASCIA PAINTED WHITE
BALCONY GUARD: 1070mm HIGH; 970mm HIGH METAL PICKETS AT 100mm O.C. RAILING SECURED TO BALCONY DECK AT 1200mm O.C. MAX.
STAINED DARK BROWN CEDAR COLUMN
STUCCO
STUCCO
GRILL
PARGING

REAR ELEVATION



LEFT ELEVATION

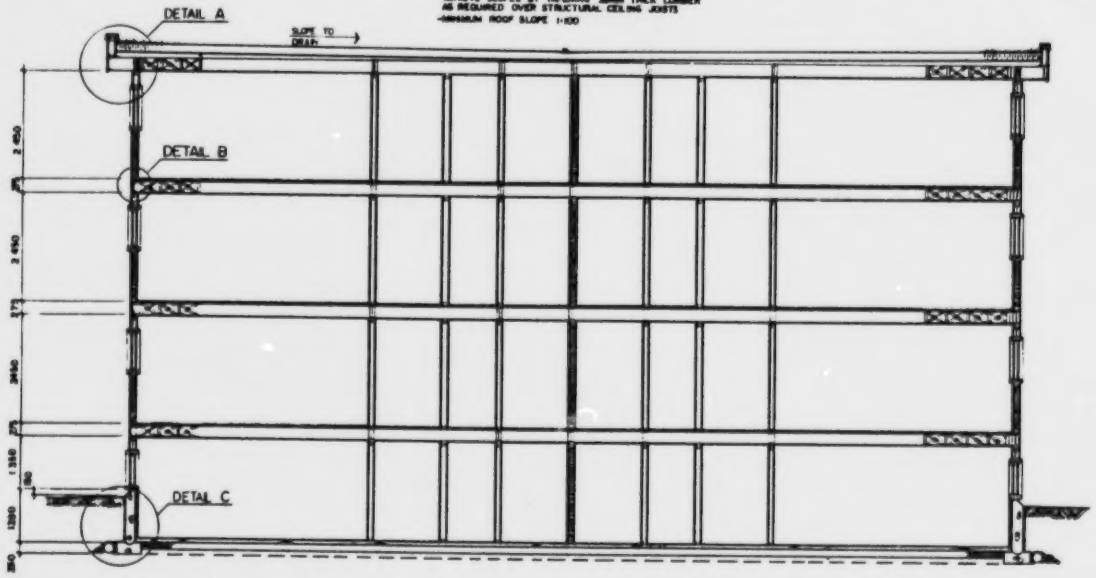
DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER OR ARCHITECT REGISTERED IN THE PROVINCE OF ALBERTA.

ALBERTA HOUSE COST COMPARISON STUDY

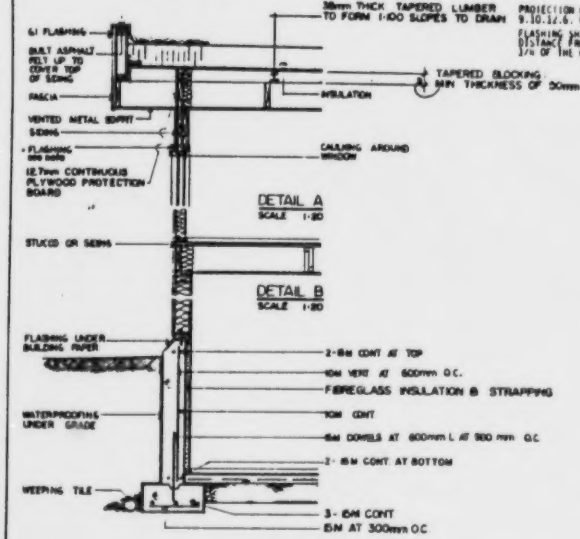
ELEVATIONS

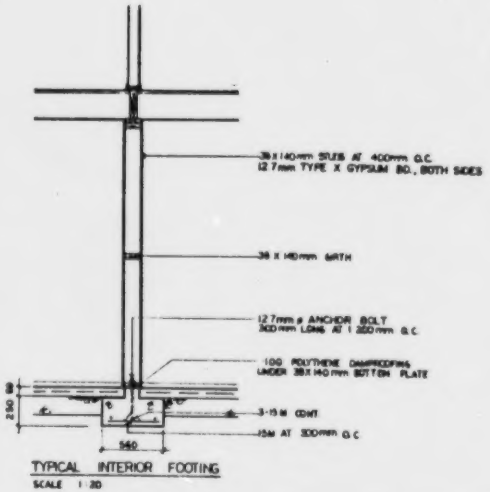
SCALE 1:50

NOTE - SEE SITE PLAN FOR ROOF SLOPE CONFIGURATION
- ACHIEVE SLOPES BY TAPERING 38mm THICK LUMBER AS REQUIRED OVER STRUCTURAL CEILING JOISTS
- MINIMUM ROOF SLOPE 1:100



SECTION
SCALE 1:50


38mm THICK TAPERED LUMBER TO FORM 1:100 SLOPES TO DRAIN
PROJECTION OF SOFFITS SHALL BE PROVIDED AS STATED IN ARTICLES 9.10.12.6. OR 9.10.12.7.
FLASHING SHALL BE APPLIED OVER ALL EXTERIOR OPENINGS WHERE THE VERTICAL DISTANCE FROM THE BOTTOM OF THE EAVE TO THE TOP OF THE TRIM IS MORE THAN 1/4 OF THE HORIZONTAL OVERHANG OF THE EAVE.
G.I. FLASHING
BUILT ASPHALT FELT UP TO COVER TOP OF SIDING
FASCIA
VENTED METAL SOFFIT
SIDING
FLASHING (MIN 0.406)
12.7mm CONTINUOUS PLYWOOD PROTECTION BOARD
TAPERED BLOCKING MIN THICKNESS OF 50mm
INSULATION
CAULKING AROUND WINDOW
DETAIL A
SCALE 1:20
STUCCO OR SIDING
DETAIL B
SCALE 1:20
FLASHING UNDER BUILDING PAPER
2-15M CONT AT TOP
10M VERT AT 600mm O.C.
FIBREGLASS INSULATION & STRAPPING
10M CONT
WATERPROOFING UNDER GRADE
15M DOWELS AT 600mm L AT 900 mm O.C.
2-15M CONT AT BOTTOM
WEEPING TILE
3-15M CONT
15M AT 300mm O.C.
DETAIL C
SCALE 1:20


38x140mm STUD AT 400mm O.C.
12.7mm TYPE X GYPSUM BD., BOTH SIDES
38 X 140mm BATH
12.7mm ø ANCHOR BOLT 300 mm LONG AT 1 200mm O.C.
100 POLYTHENE DAMPPROOFING UNDER 38X140 mm BOTTOM PLATE
3-15M CONT
15M AT 300mm O.C.
250
560

TYPICAL INTERIOR FOOTING
SCALE 1:20

ROOF CONSTRUCTION - 1 HOUR FIRE RESISTANCE RATING

- ROOFING GRAVEL
- BUILT-UP ROOFING
- RSI 6 RIGID FIBREGLASS INSULATION AND VAPOUR BARRIER
- 10mm PLYWOOD SHEATHING: ALL EDGES SUPPORTED WITH MIN. 38 x 38mm WOOD BLOCKING
- 38 x 235mm NO. 1 SPRUCE JOISTS AT 400mm O.C.
- 38 x 38mm CROSS-BRIDGING
- 15.9mm TYPE X GYPSUM BOARD

NOTE
ALTERNATE INSULATION RSI 6 FIBREGLASS BATT INSULATION SET IN JOIST SPACE

EXTERIOR WALL CONSTRUCTION

TYPE A: NO FIRE RESISTANCE RATING

- SIDING OR STUCCO
- BUILDING PAPER
- RSI 2.1 MINERAL WOOL INSULATION AND VAPOUR BARRIER
- 38 x 89mm WOOD STUDS @ 400mm O.C. (38 x 140mm WOOD STUDS @ 400mm O.C. FOR BASEMENT)
- 12.7mm GYPSUM BOARD

TYPE B: 1 HOUR FIRE RESISTANCE RATING

- SAME AS TYPE A EXCEPT MINERAL WOOL INSULATION TO HAVE DENSITY OF 1.2kG/m³, 15.9mm TYPE X GYPSUM BOARD AND STUCCO OR NON-COMBUSTIBLE SIDING

FLOOR CONSTRUCTION

- 3/4 HOUR FIRE SEPARATION AND S.T.C. RATING OF 45
- FLOOR FINISH
- 8mm PLYWOOD UNDERLAY
- 19mm T & G LUMBER OR 15.9mm PLYWOOD OR WAFERBOARD SUBFLOOR WITH MINERAL FIBRE BETWEEN JOISTS SPACED 400mm O.C.
- 38 x 235MM NO. 1 SPRUCE JOISTS AT 400mm O.C.
- 38 x 38mm CROSS-BRIDGING AT 2.1m O.C. MAX.
- RESILIENT CHANNELS
- 15.9mm TYPE X GYPSUM BOARD TYPICALLY EXCEPT FOR MECHANICAL ROOM CEILING. APPLY 2 LAYERS OF 15.9mm TYPE X GYPSUM BOARD

CORRIDOR AND DEMISING WALL CONSTRUCTION

- 3/4 HOUR FIRE SEPARATION AND S.T.C. RATING OF 45
- TWO ROWS 38 x 89mm STUDS, EACH SET 400mm O.C. STAGGERED ON COMMON 38 x 140mm PLATE, MINERAL FIBRE WITH A MASS OF AT LEAST 1.2kG/m² OR EACH SIDE
- 12.7mm GYPSUM BOARD, BOTH SIDES.

BEARING WALL CONSTRUCTION

- 3/4 HOUR FIRE RESISTANCE RATING
- 38 x 140mm OR 38 x 89mm WOOD STUDS @ 400mm O.C.
- 12.7mm TYPE X GYPSUM WALLBOARD, BOTH SIDES

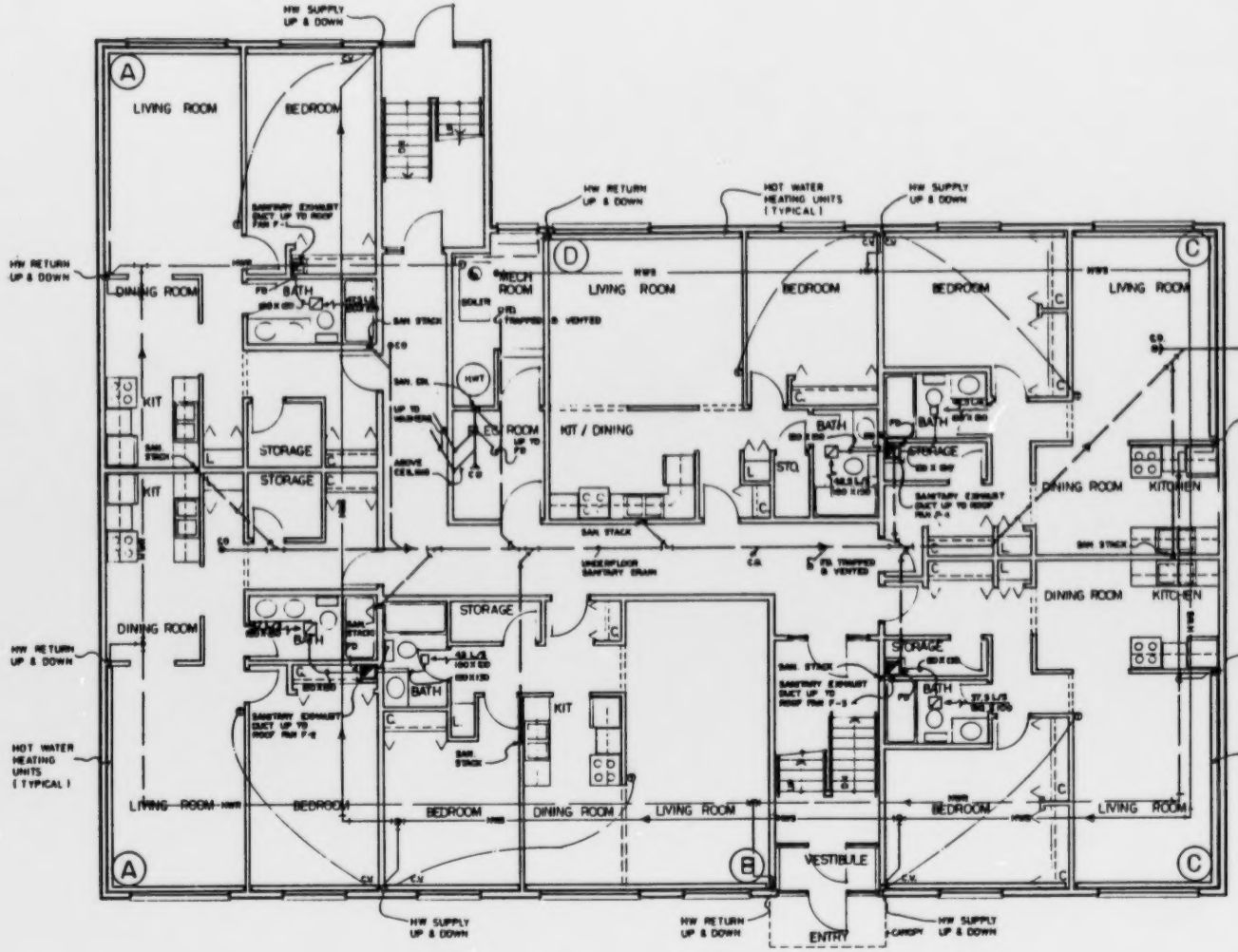
NOTES

1. PROVIDE GALVANIZED STEEL, GA. .457mm AT THE HEAD OF ALL EXTERIOR OPENINGS.
2. WEEPING TILES SHALL BE LAID ON UNDISTURBED OR WELL-COMPACTED SOIL SO THAT THE TOP OF THE WEEPING TILE IS BELOW THE UNDERSIDE OF THE FLOOR SLAB.
3. ROOF TRUSSES SHALL BE DESIGNED IN CONFORMANCE WITH PART 4 AND FOR THE APPROPRIATE GROUND SNOW LOADS STATED IN TABLE 2.2.1.B. (STANDATA 85-01-CDN)

ALBERTA HOUSE COST COMPARISON STUDY

SECTION & DETAILS

SCALES : AS SHOWN



MECHANICAL NOTES

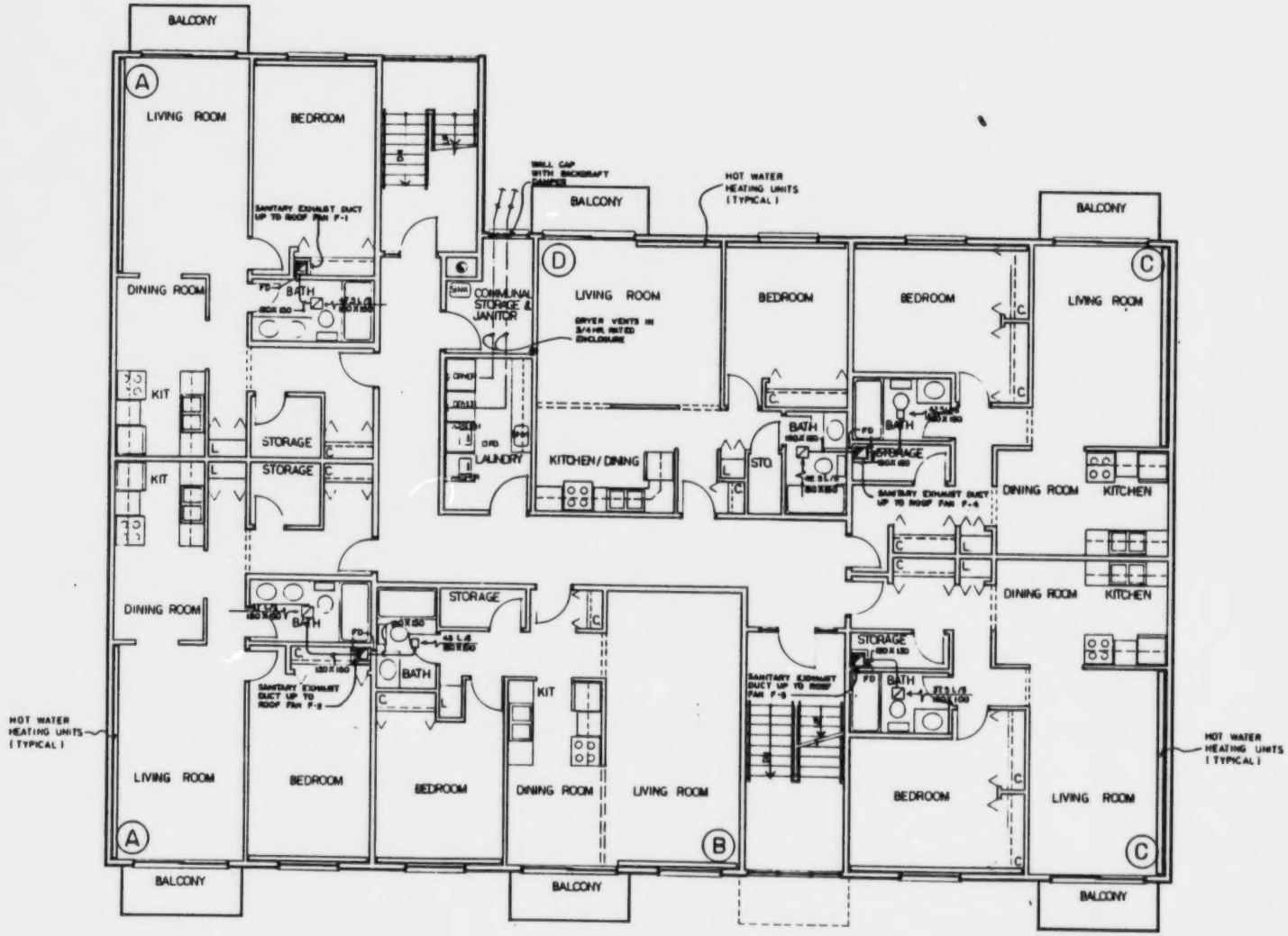
1. GAS FIRED HOT WATER HEATING BOILER SHALL BE INSTALLED IN ACCORDANCE WITH "THE GAS PROTECTION ACT AND REGULATIONS MADE PURSUANT TO THE ACT".
2. PROVIDE TYPE "B" CHIMNEY FOR BOILER.
3. PROVIDE ADEQUATE COMBUSTION AND VENTILATION AIR TO MECHANICAL ROOM.
4. ALL HEATING EQUIPMENT SHALL BE SIZED ON A CALCULATED HEAT LOSS FROM THE DWELLING UNIT SO AS TO MAINTAIN A TEMPERATURE OF 22°C INSIDE AT MAIN FLOOR WHEN OUTSIDE TEMPERATURE IS -36°C.
5. ALL HEATING AND PLUMBING PIPING SHALL BE NON-COMBUSTIBLE.
6. INSULATE ALL SANITARY EXHAUST DUCTS FROM UNDERSIDE OF ROOF TO 3RD FLOOR (2450mm).
7. PROVIDE A MINIMUM OF ONE WALL MOUNTED THERMOSTAT FOR EACH SUITE.
8. PROVIDE FIRE FLAPS ON EACH 150 x 150mm WASHROOM EXHAUST AIR GRILLE.
9. HEATING, VENTILATING AND AIR-CONDITIONING EQUIPMENT SHALL CONFORM TO THE APPROPRIATE REQUIREMENT OF THE GAS PROTECTION ACT AND REGULATIONS MADE PURSUANT TO THAT ACT.
10. AIR FROM ONE SUITE SHALL NOT BE RECIRCULATED TO ANY OTHER SUITE NOR TO A PUBLIC CORRIDOR.
11. AIR CONTAMINANTS RELEASED WITHIN BUILDINGS SHALL BE REMOVED INSOFAR AS POSSIBLE AT THE POINTS OF ORIGIN AND SHALL NOT BE PERMITTED TO ACCUMULATE IN UNSAFE CONCENTRATIONS.
12. SELF-CONTAINED MECHANICAL VENTILATION SYSTEMS, SUCH AS KITCHEN AND BATHROOM EXHAUST FANS SERVING ONLY 1 DWELLING UNIT SHALL CONFORM TO THE REQUIREMENTS OF SECTION 9.33.

C.V. CONTROL VALVE
FD FIRE DAMPER

ALBERTA HOUSE COST COMPARISON STUDY

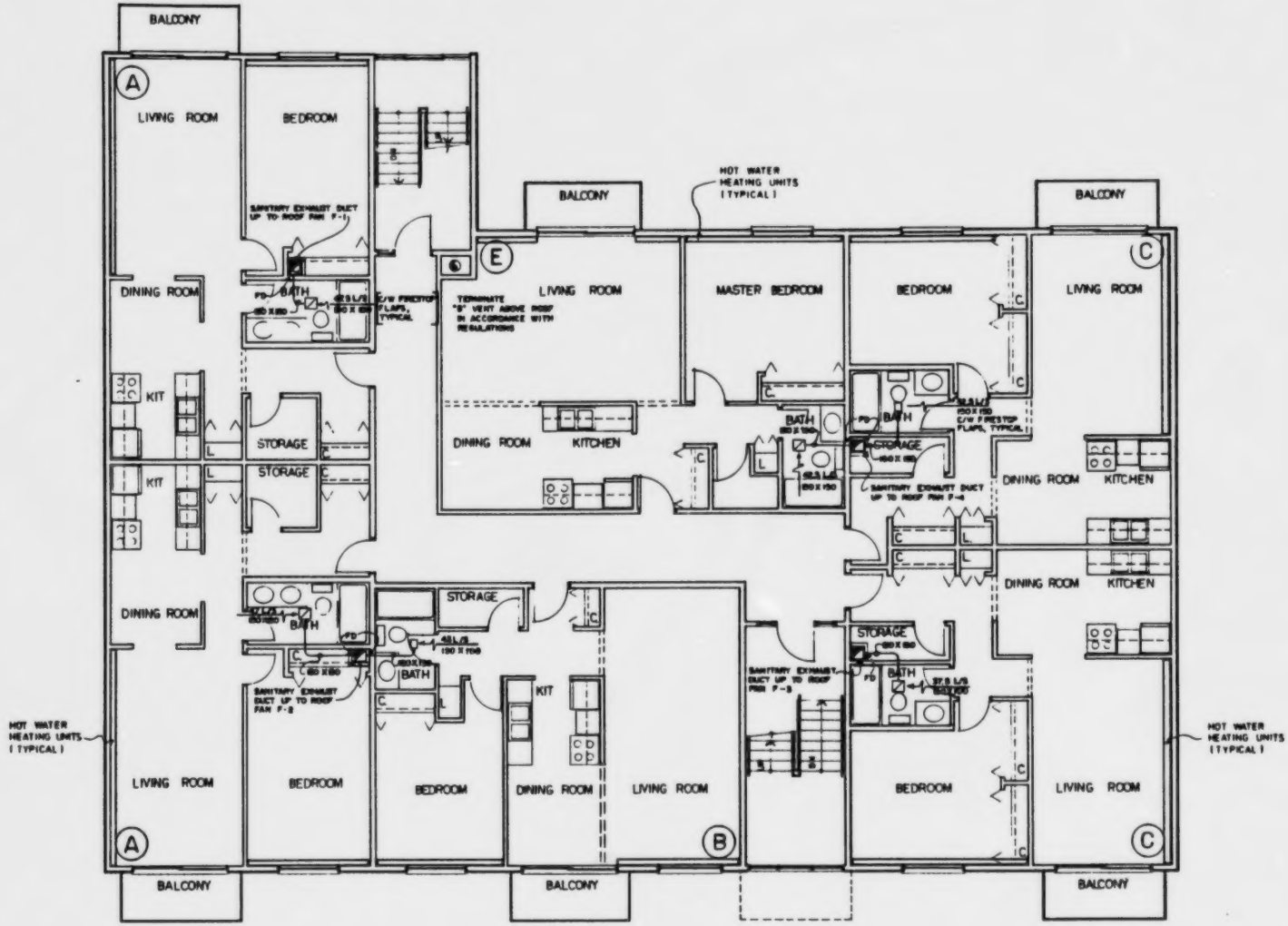
BASEMENT FLOOR PLAN
MECHANICAL LAYOUT
SCALE 1:50

0 .5 1 2 3 4 5 6m



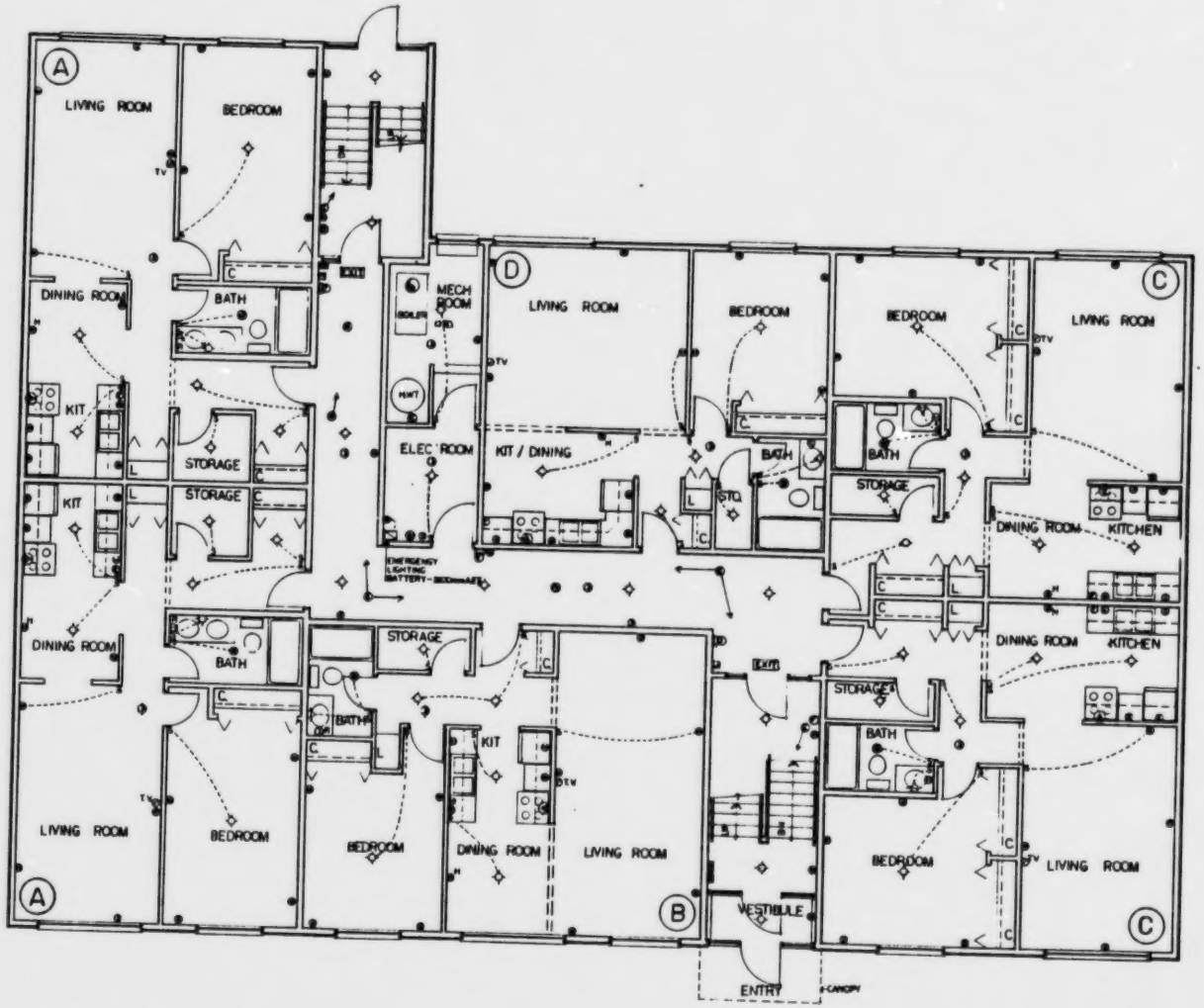
ALBERTA HOUSE COST COMPARISON STUDY

MAIN FLOOR PLAN
MECHANICAL LAYOUT
SCALE 1:100



ALBERTA HOUSE COST COMPARISON STUDY

2ND & 3RD FLOOR PLAN
MECHANICAL LAYOUT
SCALE 1:50

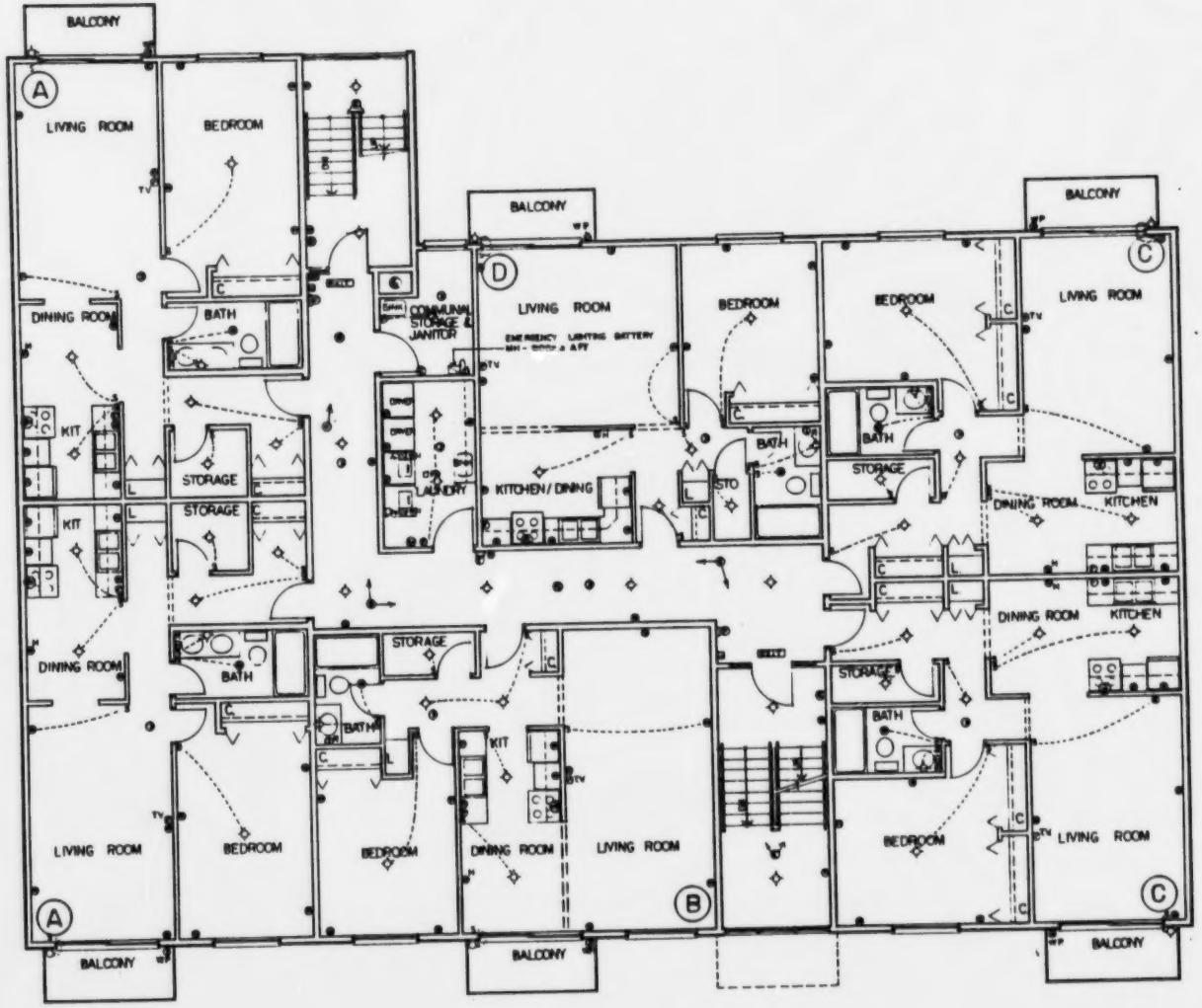


ELECTRICAL LEGEND

- EXIT LIGHTS WITH 2-25w - 120V AND 1-12V-15w EMERGENCY POWER SUPPLY
- EMERGENCY LIGHTING HEAD, 12V-12w
- EMERGENCY LIGHTING, 2 HEADS, 12V-12w
- SMOKE ALARM
- MANUAL FIRE ALARM STATION
- FIRE ALARM BELL, 25mm DIAMETER
- END-OF-LINE RESISTOR
- MASTER FIRE ALARM PANEL C/w ANNUNCIATOR AND GEL CELL BATTERY AND 120V POWER SUPPLY AND AUTOMATIC CHARGER. 1 ZONE PER FLOOR, 2 ZONES - STAIRS

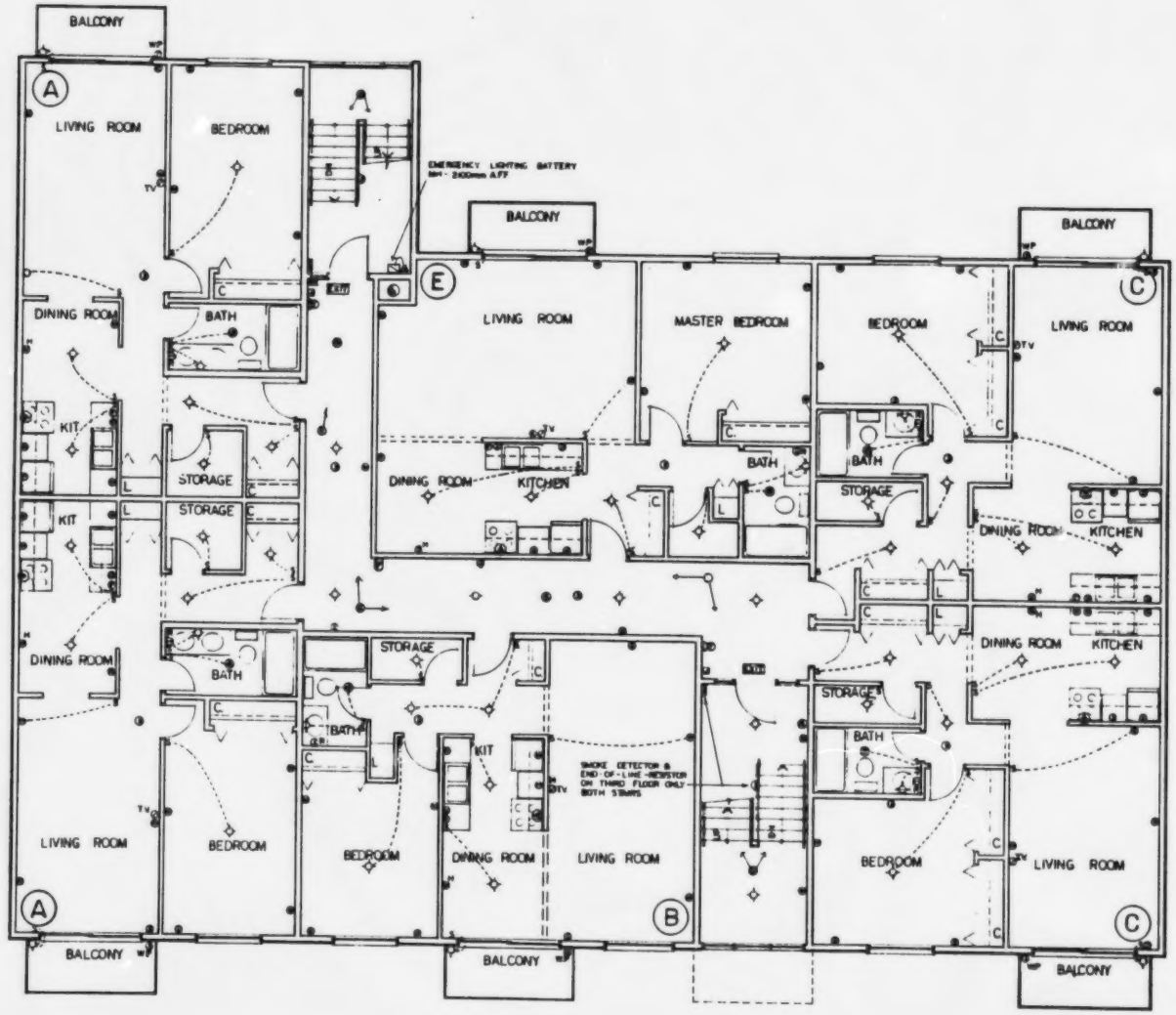
ALBERTA HOUSE COST COMPARISON STUDY

BASEMENT FLOOR PLAN
ELECTRICAL LAYOUT
SCALE 1:50



ALBERTA HOUSE COST COMPARISON STUDY

MAIN FLOOR PLAN
ELECTRICAL LAYOUT
SCALE 1:50



ALBERTA HOUSE COST COMPARISON STUDY

2ND. & 3RD. FLOOR PLAN
ELECTRICAL LAYOUT
SCALE 1:50